NUEXCO

Monthly Report

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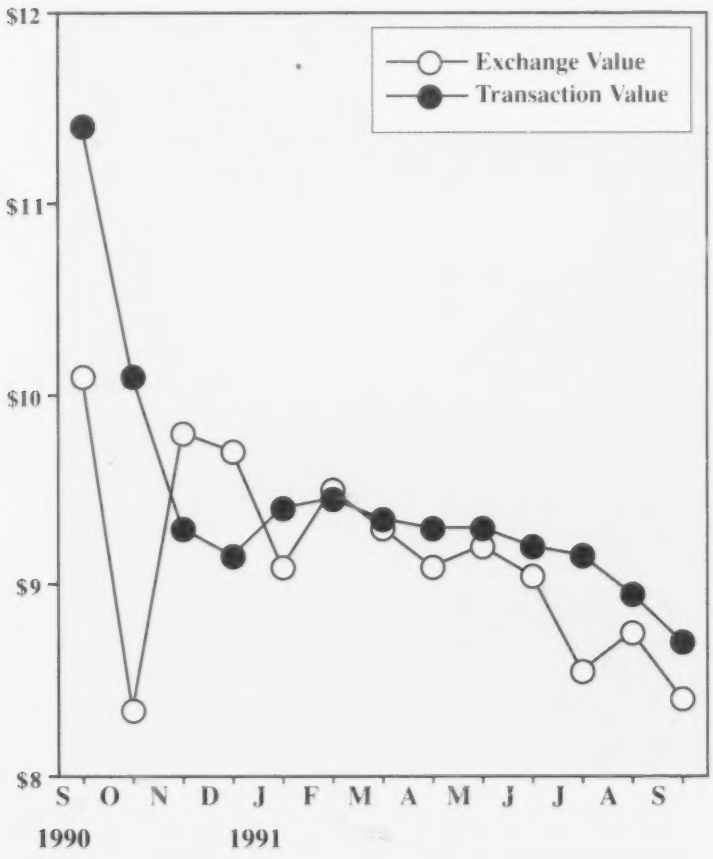

NUEXCO

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One of the most significant steps toward assuring the future of nuclear energy was the signing of an agreement by nearly all of the world's nuclear utilities establishing the World Association of Nuclear Operators (WANO). Public concern over the safety of nuclear power was seen as a major obstacle to the growth of the industry, and WANO was developed with the goal of improving the operational safety of all nuclear plants worldwide.

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Complete historical tables by month of our regularly featured government statistics for Australia, Canada, South Africa, and the USA are updated to the most recent base-year index and provided as a current reference.

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To Our Readers

NUEXCO is pleased to announce that **Charles E. Foreman** has joined our organization. Chuck has over 25 years of experience in nuclear electric power generation with General Electric, Westinghouse, and Management Analysis Company (MAC). During the past three years, Chuck worked as a management consultant for MAC. His projects included the national high-level-waste repository site characterization project at Sandia National Laboratories, the DOE new production reactor, and laser enrichment. Prior to those assignments, he was GE's Manager of Fuel Components and Fabrication Projects, and Manager of International Fuel Projects responsible for interfacing with utilities and fuel fabricators in Europe, Asia, and the USA. Chuck also worked as a start-up test physicist on several land and sea-based plants for GE and Westinghouse. He earned a Masters degree in physics from Case Institute of Technology and is a registered professional engineer. Chuck is based in Denver and is working in NUEXCO Information Services as a Senior Analyst.

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Market Values Summary

NUEXCO Market Values	This Report September 30, 1991	Last Report August 31, 1991	12 Months Ago September 30, 1990
EXCHANGE VALUE[1]	**$8.40** / lb equivalent U_3O_8	$8.75	$10.10
UF_6 VALUE[2]	**$25.50** / kg U as UF_6	$26.25	$29.50
LOAN RATE[3]	**3.5%** / annum	3.5%	— 3.5%
CONVERSION VALUE[4]	**$1.55** / lb U as UF_6	$1.60	$1.45
SWU VALUE[5] **(0.3 % tails assay)**	**$67** / SWU	$67	$50
TRANSACTION VALUE[6]	**$8.70** / lb equivalent U_3O_8	$8.95	$11.40
Transactions	**20**	26	15
Months	**3**	3	3
Millions of Pounds	**4.4**	5.9	3.7

DEFINITIONS

1 The **Exchange Value** is NUEXCO's judgment of the price at which transactions for significant quantities of natural uranium concentrates could be concluded as of the date indicated.

2 The **UF_6 Value** is NUEXCO's judgment of the price at which spot and near-term transactions for significant quantities of natural uranium hexafluoride could be concluded as of the date indicated.

3 The **Loan Value** is NUEXCO's judgment of the annual interest rate at which uranium loans could be concluded as of the date indicated.

4 The **Conversion Value** is NUEXCO's judgment of the price at which spot and near-term transactions for significant quantities of conversion services could be concluded in the secondary market as of the date indicated.

5 The **SWU Value** is NUEXCO's judgment of the price at which spot and near-term transactions for significant quantities of enrichment services could be concluded as of the date indicated.

6 The **Transaction Value** is a weighted average price of recent natural uranium sales transactions. The calculation is based on prices paid in:

a) Transactions closed within the previous three month period for which delivery is scheduled within one year of the transaction date;

b) At least ten transactions;

c) Transactions involving a sum total of at least 2 million pounds equivalent U_3O_8.

DERIVATIONS AND COMMENTS

- All **Market Values** are expressed in terms of US$.
- All **Market Values** are based on:
  - Data from recently completed transactions.
  - Data from pending transactions.
  - Firm bids to buy or borrow, and firm offers to sell or lend.
  - Prices purchasers or rates borrowers have expressed a willingness to pay, but for which NUEXCO is not aware of firm bids to buy or borrow and prices sellers or rates lenders have expressed a willingness to accept, but for which NUEXCO is not aware of firm offers to sell or lend.
- Prices associated with deliveries under old or renegotiated contracts or other than arm's-length transactions are not included in the determination of these **Market Values**.
- In the determination of prices, NUEXCO does not consider charges for transportation other than that customarily provided by suppliers.
- The prices of services or materials delivered under long-term contracts with primary suppliers are not considered in the determination of the listed values.
- For the **SWU Value**, NUEXCO converts SWU prices at varying tails and product assays to equivalent SWU prices at a tails assay of 0.30 weight percent U^{235} and a product assay of 3.0 weight-percent U^{235}, assuming feed costs corresponding to the NUEXCO **Exchange Value** and **Conversion Value** determined as of the same date.
- In calculating the **Transaction Value**, NUEXCO does not account for the price of uranium delivered in connection with contracts which call for "market price" mechanisms. This exclusion applies particularly to contracts in which delivery prices are expressed as a function of future **Exchange Values** or any other indeterminate variable. Also excluded from the calculation are any other transactions in which the delivery price is defined in such a way that it can not currently be determined.
- The sample time for the **Transaction Value** is extended as necessary to satisfy the minima for the number of transactions and quantity of material. Other currencies are converted to US dollars using conversion rates in effect on or near the transaction date.

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MARKET REVIEW

SEPTEMBER MARKET REVIEW

(as of September 30, 1991)

OVERVIEW

Limited demand and abundant supply combined to push uranium prices lower during September. The Exchange Value fell $0.35, to $8.40 per pound U_3O_8, while the UF_6 Value dropped to $25.50 per kgU as UF_6 on September 30, 1991, down from the August 31 Value of $26.25. Six near-term uranium transactions were reported, totalling over 1.6 million pounds equivalent U_3O_8. Four of the sales involved concentrates, one involved natural UF_6, and the other involved enriched uranium product (EUP). Two long-term uranium sales also were reported, totalling over 1.7 million pounds equivalent U_3O_8.

Year-to-date near-term uranium market volume has reached 19.3 million pounds equivalent U_3O_8 in 82 sales (**Table 1**). While the number of sales thus far is comparable to 1990's level of 88 sales, this year's cumulative volume is lagging far behind 1990's record pace of 34.1 million pounds (through September). This is primarily due to a lack of large discretionary purchases. Many buyers believe that low uranium prices will continue in the near-term and are purchasing selectively when prices appear attractive.

Table 1
NEAR-TERM URANIUM SALES SUMMARY

	September 1991		Year-to-Date	
	No. of Sales	Volume[1]	No. of Sales	Volume[1]
Concentrates	4	0.8	55	11.8
Natural UF_6	1	0.1	18	5.3
EUP	1	0.7	9	2.2
Total[2]	**6**	**1.6**	**82**	**19.3**

[1] Million pounds equivalent U_3O_8
[2] Due to independent rounding, columns may not equal total.

The Loan Rate remained unchanged at 3.5 percent per annum. Two loans for a total of over one million pounds equivalent U_3O_8 were reported in September. In the conversion market, competition among suppliers resulted in a $0.05 adjustment of the Conversion Value, down to $1.55 per pound U as UF_6. One sale was reported involving a moderate quantity of conversion services.

The near-term enrichment market stabilized and the SWU Value was unchanged at $67 per SWU. Three near-term and seven long-term enrichment sales were reported, involving a total of almost four million SWU.

URANIUM AND CONVERSION

The **Exchange Value** dropped $0.35, to **$8.40** per pound U_3O_8. Weak demand was the key reason for the decline. Limited sales opportunities led to increased downward pressure on the market as sellers became anxious to complete transactions prior to year-end. The little demand that existed was filled early in the month with four of the six uranium sales made during the first week of September. By month-end, sellers were competing aggressively on every sales opportunity. The existence of abundant supply and limited demand will continue to exert downward pressure, and is likely to persist until low prices entice discretionary buyers into the market, or until sellers withdraw from such a market.

Four near-term concentrates sales were reported during September; three utilities and a producer purchased almost 800 thousand pounds equivalent U_3O_8 from intermediaries for delivery before the end of the year.

* * *

The **UF_6 Value** also declined, falling $0.75, to **$25.50** per kgU as UF_6. The UF_6 market continues to take its cues from the concentrates market. Minimal demand for UF_6, combined with a greater abundance of supply in the form of

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concentrates, has led to very little activity in the UF_6 market in the past few months. As a result, both buyers and sellers look to the concentrates market for price trends when evaluating UF_6 as an alternative.

Two near-term sales involving UF_6 were reported during September: one involved over 100 thousand pounds equivalent U_3O_8 as natural UF_6; the other included over 700 thousand pounds equivalent U_3O_8 as EUP. In the EUP sale, a utility purchased the material from an intermediary for delivery during the second quarter of 1992.

* * *

In the long-term uranium market, two sales were reported, one involving concentrates and the other involving EUP. Together, the two utility purchases totalled over 1.7 million pounds equivalent U_3O_8 for delivery during the period 1992-1995.

* * *

The **Transaction Value** dropped $0.25, to **$8.70** per pound U_3O_8 based on 20 transactions over 3 months involving 4.4 million pounds equivalent U_3O_8.

* * *

Active uranium supply declined by over 1.5 million thousand pounds, to **5.1** million pounds equivalent U_3O_8, but still overwhelms **active uranium demand,** which also declined, falling to only **450** thousand pounds equivalent U_3O_8. As a result, the new **supply/demand ratio** rose to **11.4** to 1, demonstrating not only the abundance of supply, but particularly the extremely low level of demand.

* * *

The **Loan Rate** remained at **3.5** percent per annum. In September's two loans, a utility and a producer lent a total exceeding one million pounds equivalent U_3O_8 at levels near the prevailing Loan Rate. Loan supply climbed back to nearly 6.5 million pounds equivalent U_3O_8 (**Table 2**), while loan demand remained at zero. Any loan demand that does arise during a month is quickly met by lenders, who are eager to lend their material.

* * *

The **Conversion Value** was adjusted downward $0.05, to **$1.55** per pound U as UF_6, reflecting the price level at which substantial supply is available. Active conversion supply now exceeds 2.5 million pounds U, while active conversion demand has fallen to zero. This lack of demand may have stalled the recent trend of rising prices. One near-term transaction was reported in which a utility purchased a moderate quantity of conversion services at a price near the September 30 Conversion Value.

Table 2
NEAR-TERM SUPPLY/DEMAND SUMMARY

	Active Supply[1]	Active Demand[1]
• Uranium (thousand lbs equivalent U_3O_8)	5,115	450
• Supply/Demand Ratio:	11.4	
• Loan (thousand lbs equivalent U_3O_8)	6,485	0
• Conversion (thousand lbs U as UF_6)	2,570	0
• SWU (thousand SWUs)	450	480

[1] Supply and Demand tables in the Market Review section of this Report provide details for each category.

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MARKET REVIEW

ENRICHMENT SERVICES AND ENRICHED URANIUM PRODUCT

The **SWU Value** was unchanged at **$67** per SWU as prices stabilized during September. However, the market remained fairly active with three near-term enrichment sales reported. European and US utilities purchased a total of over 300 thousand SWU at prices at or near the September 30 SWU Value. One of the sales involved SWU contained in EUP.

In the the long-term SWU market, activity remained brisk as seven sales were reported. European and US utilities purchased over 3.5 million SWU for delivery during the period 1992-2001. Suppliers include an intermediary and several primary enrichers. At month end, at least ten utilities were still evaluating long-term offers for up to 10 million SWU, so the market promises to remain active in the coming months.

Table 3
ENRICHMENT PRICES
(September 30, 1991)

Prices	This Month Report 278	Last Month Report 277	12 Months Ago Report 266
NUEXCO SWU Value ($US per SWU)	67	67	50
US DOE SWU prices: ($US per SWU)			
USEC	121.50[1]	117.85[2]	117.85[2]
AFC	153.00[3]	153.00[3]	153.00[3]
Requirements	157.00[3]	157.00[3]	157.00[3]
Incentive Price (IP2)	104.67[4]	100.68[5]	100.68[5]
Calculated worth of enriched UF_6[6]: ($US per KgU as UF_6)			
2.0 w/o U^{235}	219	223	207
2.5 w/o U^{235}	306	311	285
3.0 w/o U^{235}	396	403	366
3.5 w/o U^{235}	488	496	447
4.0 w/o U^{235}	582	591	530
4.5 w/o U^{235}	677	687	614

[1] Effective 10/1/91.
[2] Effective 10/1/89 to 9/30/91.
[3] Effective since 10/1/84.
[4] Estimated IP2 for FY92: Effective 10/1/91 to 9/30/92, for up to 30% of annual requirements.
[5] IP2: Effective 10/1/90 to 9/30/91, for up to 30% of annual requirements.
[6] Calculated using the NUEXCO Exchange Value, Conversion Value, SWU Value and 0.30 w/o U^{235} tails assay.

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RECENT TRANSACTIONS

Uranium Sales [1]

NUEXCO Transaction Number	Delivery Period	Approximate Quantity (thousand pounds equivalent U_3O_8)	Price Within Percentage Range [2] of Current Exchange or UF_6 Value	Buyer	Seller	Remarks
5223	1992-1995	301-600	See Remarks	Utility	Producer	Series of Fixed Prices
5225	1991	Less than 50	98-102	Utility	Intermediary	
5227	1991	301-600	103-110	Utility	Intermediary	
5231	1991	50-100	98-102	Producer	Intermediary	
5251	1991	301-600	90-97	Utility	Intermediary	
5253A	1992	601-1,000	See Remarks	Utility	Intermediary	Contained in EUP
5254	1991	101-300	98-102	R	Convertor	UF_6
5258A	1992-1994	1,001-3,000	See Remarks	Utility	Intermediary	Contained in EUP

R means that NUEXCO either does not know, or that NUEXCO has restricted that information to protect client or source confidentiality.

[1] Transactions listed are not limited to those in which NUEXCO was involved, but also include others of which NUEXCO is aware. NUEXCO may delay reporting some transactions in order to protect proprietary information.

[2] The ranges *Below 90, 90-97, 98-102, 103-110, Above 110,* represent percentages (rounded to whole numbers) of the appropriate current Exchange Value or UF_6 Value. The endpoints of each range are included within that range.

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MARKET REVIEW

RECENT TRANSACTIONS

Natural Uranium Loans [1]

NUEXCO Transaction Number	Delivery Period	Approximate Quantity (thousand pounds equivalent U_3O_8)	Price Within Percentage Range [2] of Current Loan Rate	Borrower	Lender	Remarks
5226	1991	601-1,000	98-102	Intermediary	Utility	UF_6
5235	1991	301-600	R	Intermediary	Producer	

Conversion Sales [1]

NUEXCO Transaction Number	Delivery Period	Approximate Quantity (thousand pounds of U equivalent)	Price Within Percentage Range [2] of Current Conversion Value	Buyer	Seller	Remarks
5229	1991	301-600	98-102	Utility	Convertor	

Enrichment Sales [1]

NUEXCO Transaction Number	Delivery Period	Approximate Quantity [3] (thousand SWU)	Price Within Percentage Range [2] of Current SWU Value [4]	Buyer	Seller	Remarks
5215	1992	Less than 50	98-102	Utility	Intermediary	
5228	1996-1998	101-300	R	Utility	R	
5230	1995-2001	601-1,000	See Remarks	R	Producer	Series of Fixed Prices
5232	1996-1999	R	See Remarks	Utility	Producer	Base Escalated
5233	1996-1999	R	See Remarks	Utility	Producer	Series of Fixed Prices
5234	1996-1999	R	R	Utility	Producer	
5253B	1992	101-300	See Remarks	Utility	Intermediary	Contained in EUP
5257	1992	101-300	R	Utility	Intermediary	
5258B	1992-1994	101-300	See Remarks	Utility	Intermediary	Contained in EUP
5260	1993-2001	601-1,000	See Remarks	Utility	Producer	Series of Fixed Prices

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[2] The ranges *Below 90, 90-97, 98-102, 103-110, Above 110*, represent percentages (rounded to whole numbers) of the appropriate current Market Value. The endpoints of each range are included within that range.

[3] If tails assay is unknown or unspecified, NUEXCO's calculation of SWU quantity assumes 0.30 w/o tails assay.

[4] Prices are usually normalized to 0.30 w/o tails assay. When prices and SWU values are expressed as discounts from a reference price (e.g., X dollars less than DOE's USEC base price at time of delivery), the percentage price range is based on the discounted prices, not on the reference price.

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SUPPLY AND DEMAND

Uranium Supply

NUEXCO Project Number	Quantity (Thousand Pounds equivalent U_3O_8) Spot or Near-term [1]	Intermediate or Long-term [2]	Delivery Period	Remarks
Available for Sale:				
ACTIVE				
90-1227	500	—	1991	
90-1307*	330	—	1991	
91-1215*	785	—	1992	
91-1502	500	—	1991	
91-1503A*	500	3,500	1991-1993	UF_6e
91-1505	1,500	—	1991	
91-1506	500	—	1991	
91-1507	500	—	1991	
Total	**5,115**			
INACTIVE	**3,930**			
Available for Loan:				
ACTIVE				
91-1084	3,900	—		U_3O_8
91-1219*	260	—		U_3O_8
91-1220*	325	—		UF_6
91-1174*	2,000	—		U_3O_8
Total	**6,485**			
INACTIVE	*None reported*			

* New or revised since last month.

[1] For delivery within one year, measured from the date of this Report. This category excludes material deliverable within one year under other than spot or near-term contracts.

[2] For delivery beyond one year, measured from the date of this Report.

Active Projects reclassified as Inactive since last month: 90-1231
Active Projects removed since last month: 91-1151, 91-1510

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MARKET REVIEW

SUPPLY AND DEMAND

Uranium Demand

NUEXCO Project Number	Quantity (Thousand Pounds equivalent U_3O_8) Spot or Near-term [1]	Intermediate or Long-term [2]	Delivery Period	Remarks
Inquiries to Purchase:				
ACTIVE				
91-1214*	240	—	1991	
91-1229*	210	—	1991	
91-1118	—	300 per year	1993-1998	U_3O_8/UF_6
91-1184	—	350 per year	1993-1997	
91-1209	—	100 per year	1991-1995	U_3O_8/UF_6
91-1227A*	—	60	1992-1994	UF_6e
91-1197	—	2,210	1992-1997	U_3O_8/UF_6
91-1223*	—	260	1992	UF_6
Total	**450**			
INACTIVE	**810**			
Inquiries to Borrow	*No inquiries to borrow are reported*			

* New or revised since last month.

[1] For delivery within one year, measured from the date of this Report. This category excludes material deliverable within one year under other than spot or near-term contracts.

[2] For delivery beyond one year, measured from the date of this Report.

Active Projects reclassified as Inactive since last month: 91-1201
Active Projects removed since last month: 91-1141, 91-1183, 91-1186, 91-1188A, 91-1204, 91-1208A 91-1213

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SUPPLY AND DEMAND

Conversion Supply And Demand

NUEXCO Project Number	Quantity (Thousand Pounds U as UF6) Within 3 Years [1]	Beyond 3 Years [1]	Delivery Period	Remarks
Available for Sale:				
ACTIVE				
91-1202	1,650	—	1991	
91-1221*	220	—	1991	
91-1500	300	—	1991	
91-1501	400	—	1991	
Total	**2,570**			
INACTIVE	*None reported*			
Inquiries to Purchase:				
ACTIVE				
91-1170	—	1,100	1992-1996	
Total	**0**			
INACTIVE	*None reported*			

* New or revised since last month.

[1] Measured from the date of this Report.

Active Projects reclassified as Inactive since last month: *none*
Active Projects removed since last month: 91-1174, 91-1185

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MARKET REVIEW

SUPPLY AND DEMAND

SWU Supply And Demand

NUEXCO Project Number	Quantity (Thousand SWUs) Spot or Near-term [1]	Intermediate or Long-term [2]	Delivery Period	Remarks
Available for Sale				
ACTIVE				
90-1078D*	250	—	1991	UF6e
91-1509	200	—	1992	
91-1500	—	1,000 per year	1991 on	
Total	**450**			
INACTIVE	**935**			
Inquiries to Purchase				
ACTIVE				
91-1206	5	—	1992	UF6e
91-1210	400	—	1991-1992	
91-1211*	15	—	1992	
91-1224*	60	—	1992	UF6e
90-1196	—	60 per year	1995 on	
91-1027	—	55 per year	1996-2000	
91-1094B	—	385 per year	1994-1995	UF6e
91-1142	—	75 per year	1995-2000	
91-1199	—	385 per year	1996-2000	
91-1066	—	320	1995-2000	
91-1152	—	2,700	1995-2001	
91-1171	—	560	1995-1998	
91-1218*	—	1,900	1993-2001	
91-1227B*	—	35	1992-1994	UF6e
Total	**480**			
INACTIVE	**445**			

* New or revised since last month.

[1] For delivery within one year, measured from the date of this Report. This category excludes SWU deliverable within one year under other than spot or near-term contracts.

[2] For delivery beyond one year, measured from the date of this Report.

Active Projects reclassified as Inactive since last month: 91-1508

Active Projects removed since last month: 90-1144, 90-1224B, 90-1301,91-1105, 91-1131, 91-1136, 91-1154, 91-1155, 91-1160, 91-1179, 91-1188B, 91-1208B

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MARKET VALUES EXPRESSED IN SELECTED CURRENCIES

Exchange Value[1]

Country (currency)	per lb equivalent U_3O_8 as Concentrates			per kg U as Concentrates		
	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)
Australia (dollar)	10.51	11.15	12.22	27.33	29.00	31.77
Belgium (franc)	287.97	314.52	324.55	748.65	817.69	843.76
Canada (dollar)	9.50	9.99	11.67	24.71	25.97	30.33
EC (ecu)	6.82	7.42	7.69	17.73	19.30	19.99
Finland (markka)	34.06	37.11	37.37	88.55	96.47	97.15
France (franc)	47.63	51.90	52.73	123.82	134.93	137.09
Germany (mark)	13.97	15.29	15.77	36.32	39.74	40.99
Italy (lira)	10,456	11,404	11,796	27,182	29,647	30,668
Japan (yen)	1,116	1,197	1,393	2,901	3,112	3,622
Netherlands (guilder)	15.75	17.21	17.77	40.95	44.75	46.20
So. Africa (comm. rand)	23.56	25.14	25.96	61.26	65.37	67.50
So. Korea (won)	6,111	6,407	7,222	15,888	16,657	18,774
Spain (peseta)	885.80	951.29	986.81	2,303	2,473	2,565
Sweden (krona)	51.00	55.45	58.01	132.59	144.16	150.82
Switzerland (franc)	12.18	13.33	13.06	31.66	34.65	33.96
Taiwan (dollar)	220.08	231.18	270.68	572.16	601.01	703.72
UK (pound)	4.80	5.21	5.37	12.47	13.54	13.97
US (dollar)	8.40	8.75	10.10	21.84	22.75	26.26

Transaction Value[1]

Country (currency)	per lb equivalent U_3O_8 as Concentrates			per kg U as Concentrates		
	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)
Australia (dollar)	10.89	11.41	13.79	28.31	29.66	35.86
Belgium (franc)	298.25	321.71	366.32	775.39	836.38	952.36
Canada (dollar)	9.84	10.22	13.17	25.59	26.56	34.23
EC (ecu)	7.06	7.59	8.68	18.37	19.74	22.56
Finland (markka)	35.28	37.96	42.18	91.72	98.68	109.66
France (franc)	49.33	53.09	59.52	128.24	138.02	154.74
Germany (mark)	14.47	15.64	17.80	37.62	40.65	46.27
Italy (lira)	10,829	11,664	13,315	28,153	30,325	34,615
Japan (yen)	1,156	1,224	1,573	3,005	3,183	4,088
Netherlands (guilder)	16.31	17.61	20.06	42.41	45.78	52.15
So. Africa (comm. rand)	24.40	25.72	29.31	63.44	66.86	76.19
So. Korea (won)	6,330	6,553	8,151	16,455	17,037	21,191
Spain (peseta)	917.43	973.04	1,114	2,385	2,530	2,896
Sweden (krona)	52.82	56.72	65.48	137.33	147.45	170.23
Switzerland (franc)	12.61	13.63	14.75	32.79	35.44	38.34
Taiwan (dollar)	227.94	236.46	305.52	592.59	614.74	794.29
UK (pound)	4.97	5.33	6.06	12.92	13.85	15.77
US (dollar)	8.70	8.95	11.40	22.62	23.27	29.64

[1] As of May 1991 Report #273: calculated using currency exchange rates for the last business day of the month, as published in *The Wall Street Journal*. Prior to May 1991 Report #273: calculated using currency exchange rates published in *The Wall Street Journal* on the last business day of the month.

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MARKET REVIEW

MARKET VALUES EXPRESSED IN SELECTED CURRENCIES

Conversion Value[1]

Country (currency)	per lb U as UF_6			per kg U as UF_6		
	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)
Australia (dollar)	1.94	2.04	1.75	4.28	4.50	3.87
Belgium (franc)	53.14	57.51	46.49	117.15	126.79	102.72
Canada (dollar)	1.75	1.83	1.67	3.87	4.03	3.69
EC (ecu)	1.26	1.36	1.19	2.77	2.99	2.43
Finland (markka)	6.29	6.79	5.37	13.86	14.96	11.83
France (franc)	8.79	9.49	7.57	19.37	20.92	16.69
Germany (mark)	2.58	2.80	2.26	5.68	6.16	4.99
Italy (lira)	1,929	2,085	1,694	4,253	4,597	3,734
Japan (yen)	205.93	218.88	200.03	453.99	482.54	440.99
Netherlands (guilder)	2.91	3.15	2.55	6.41	6.94	5.63
So. Africa (comm. rand)	4.35	4.60	3.73	9.59	10.14	8.22
So. Korea (won)	1,128	1,172	1,037	2,486	2,583	2,286
Spain (peseta)	163.45	173.95	141.67	360.35	383.50	312.33
Sweden (krona)	9.41	10.14	8.33	20.75	22.35	18.36
Switzerland (franc)	2.25	2.44	1.88	4.95	5.37	4.13
Taiwan (dollar)	40.61	42.27	38.86	89.53	93.19	85.67
UK (pound)	0.89	0.95	0.77	1.95	2.10	1.70
US (dollar)	1.55	1.60	1.45	3.42	3.53	3.20

SWU Value And UF_6 Value[1]

Country (currency)	SWU Value at 0.30 % Tails Assay			UF_6 Value per kg U as UF_6		
	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)	This Month (Sept. 30, 1991)	Last Month (Aug. 31, 1991)	12 Months Ago (Sept. 30, 1990)
Australia (dollar)	83.85	85.40	60.50	31.91	33.46	35.69
Belgium (franc)	2,297	2,408	1,607	874.19	943.57	947.94
Canada (dollar)	75.81	76.49	57.75	28.85	29.97	34.07
EC (ecu)	54.40	56.85	38.06	20.71	22.27	22.45
Finland (markka)	271.68	284.14	185.00	103.40	111.32	109.15
France (franc)	379.88	397.41	261.06	144.58	155.70	154.02
Germany (mark)	111.43	117.05	78.05	42.41	45.86	46.05
Italy (lira)	83,396	87,319	58,398	31,740	34,211	34,455
Japan (yen)	8,901	9,166	6,898	3,388	3,591	4,070
Netherlands (guilder)	125.63	131.81	87.98	47.82	51.64	51.91
So. Africa (comm. rand)	187.94	192.53	128.53	71.53	75.43	75.84
So. Korea (won)	48,745	49,059	42,900	18,552	19,221	21,093
Spain (peseta)	7,065	7,284	4,885	2,689	2,854	2,882
Sweden (krona)	406.80	424.59	287.19	154.83	166.35	169.44
Switzerland (franc)	97.14	102.04	64.67	36.97	39.98	38.16
Taiwan (dollar)	1,755	1,770	1,608	668.10	693.53	790.61
UK (pound)	38.26	39.88	26.60	14.56	15.63	15.69
US (dollar)	67.00	67.00	50.00	25.50	26.25	29.50

[1] As of May 1991 Report #273: calculated using currency exchange rates for the last business day of the month, as published in *The Wall Street Journal*. Prior to May 1991 Report #273: calculated using currency exchange rates published in *The Wall Street Journal* on the last business day of the month.

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RECENT DEVELOPMENTS

USCEA

USCEA URANIUM SEMINAR '91

The US Council for Energy Awareness held its annual International Uranium Seminar '91 in St. Petersburg, Florida, on September 23-25. Over 200 delegates attended and 15 papers were presented. A highlight of the conference was a panel discussion on the future of the uranium market which provided a provocative topic that both panel members and the audience enjoyed. Brief summaries of selected papers and of the panel discussion are given below.

Australia's Uranium Supply Potential and Policies: An Update

Robert G. Crick, Assistant Secretary of the Uranium and Nuclear Industry Branch of the Australian Department of Primary Industries and Energy, built upon the paper he presented at the USCEA Uranium Seminar in San Antonio last year. He confirmed that the governing Australian Labor Party has retained its policy of restricting uranium mining to the projects currently in operation. He also noted that within the past year, agreements have been reached between Australia and both Canada and the USA which will allow international obligation exchanges under Australian bilateral safeguards agreements. These agreements will permit the exchange of safeguards obligations on nuclear material in different safeguards jurisdictions, as opposed to physical shipment of the material between the jurisdictions. Mr. Crick also maintained that Australia would "remain a substantial and reliable source of uranium at commercially competitive prices".

Canada's Uranium Industry - Prospects for the Future

Mr. R. M. Williams, Director of the Uranium Division within the Electricity Branch of Canada's Department of Energy, Mines and Resources, summarized recent developments in Canada and gave a relatively optimistic view of the future. He gave an overview of production and ownership changes along with an outline of other potential production sites. According to Williams, Canadian output accounted for 30 percent of Western World uranium production, and 45 percent of Canadian uranium exports went to the USA during the period 1986 through 1990. He maintains that the potential for additional uranium discoveries, coupled with policies that favor investment in the uranium industry, will enable the Canadian uranium industry to remain competitive.

Perspectives on the US Uranium Industry

Howard L. Walton, Director of the Nuclear and Alternate Fuels Division, Energy Information Administration, Department of Energy, discussed the information compiled by the Energy Information Administration concerning the domestic uranium industry, US policies that affect the industry, and possible future trends. Several new statistics were presented, including the average price of uranium delivered from domestic suppliers to domestic utilities during 1990, which fell by about $4 from 1989, to $15.70 per pound U_3O_8. Uranium imports into the USA jumped 80 percent, to 23.7 million pounds in 1990, while US uranium production decreased 35 percent, to 8.9 million pounds.

What is a Participation?

The How, What and Why of Total and Malapai

James J. Graham, President and Chief Executive Officer of Total Minerals Corporation, discussed the acquisition of Malapai Resources Company by an EdF subsidiary and the arrangements with Total which followed. *The Why:* Total saw a need to increase its size and contract base and EdF saw a need for long-term security of supply. As EdF focused on the acquisition of Malapai, it came to realize that it needed help analyzing Malapai, so Total was asked to provide its expertise. *The How:* As EdF wanted a long-term relationship with an experienced French operator, Total seemed to be a perfect fit. From that point the relationship was defined. *What* is this participation? Total Minerals and Malapai Resources both retain full ownership of their assets, but share all costs, revenues, and liabilities. A twenty-year contract

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between EdF and Total/Malapai is also tied to the participation agreement. The agreement has assured the existence of a uranium producer through a soft market.

Changing Spots: The Transformation of a Uranium Producer

An overview of Pathfinder Mines Corporation's past, along with its future direction, was given by Robert E. Moyer, Manager of Minerals Marketing for Cogema, Inc. Mr. Moyer suggested that the company has followed a path similar to that suggested several years ago in a paper written by Tom Pool, a supply analyst for NUEXCO. In that article, Mr. Pool proposed that large open-pit and underground uranium mines would not continue to be viable in the USA because of the lack of flexibility in increasing and decreasing production. Instead, viable uranium production in the USA would be restricted to solution mines or small, high-grade underground mines. According to Moyer, all of Pathfinder's large conventional mills and large open-pit mining operations will be gone by the mid- to late 1990s. He suggested that they will be replaced by in-situ leach mines in Wyoming and possibly by small high-grade underground mines in Northern Arizona.

Brokers: The Market Confessors

Daniel R. Einbund, Vice President of New York Nuclear Corporation, gave a very animated speech on the role of brokers in the uranium market. He likened the role of the broker to that of "the curate who hears confessions in the local parish", hearing the secrets of the market players. Through a series of staged telephone calls, he illustrated the changing roles and perceptions of players in the uranium market. According to Mr. Einbund, "There really are no taboos in our industry", just misconceptions that have been accepted by the majority of market participants.

A Utility's Role in the Development of Nuclear Fuel Procurement Policy

William J. Alexander, Technical Buyer of Nuclear Fuels for Philadelphia Electric Company, discussed the difficulties involved in reaching agreement between Public Utility Commissions (PUC) and selected utilities regarding the potentially restrictive Nuclear Fuel Procurement Guidelines. In addition, he examined issues considered important by the Utility Commission and utilities. Using the PUC of the Commonwealth of Pennsylvania and the state's nuclear utilities as examples, he examined the areas of the guidelines issued by the Pennsylvania PUC that covered such controversial areas as inventory management and contract lengths. He also suggested that other state utility commissions could be expected to become more active in these areas, as uranium prices recover in future years.

Modeling Uncertainty in Uranium Supply Strategies

Kevin O'Sullivan, Senior Analyst for Pacific Gas and Electric Company, discussed the Contract Mix computer model used by a group of eleven utilities (Contract Mix Users Group) to evaluate the expected costs and risks of uranium contracting decisions. The Fortran computer program simulates least-cost acquisitions to satisfy nuclear fuel requirements. Using the program with up to seven spot-price-trend models, a utility or a producer can balance an expected purchase or sales strategy with some range of risk, as represented by contract commitment levels or production volume. Although there are limitations, Mr. O'Sullivan contends that "the process is useful as a first estimate to identify supply sources that are strong and weak in different market scenarios."

Directions for the 1990s: *Which Way is Up?*

The panel discussion on factors influencing the uranium market was the most lively of the sessions. Moderated by George White, Jr., the panel was composed of representatives from producers, utilities, and brokers. Throughout the discussion, mainly as the result of audience participation, the dominance of PUCs as a factor in utility inventory decisions was brought up. The panel appeared to accept the idea that the trend towards shorter-term contracting would continue, but that long-term options would become more common. Panel members hesitated to speculate on the effect that political and economic changes in the Soviet Union and former East Bloc countries would have on the market.

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WASHINGTON FOCUS

by Linda L. Gunter

During September, Congress increased its attention to the problems facing DOE's uranium enrichment program and continued considering legislation to restructure the program into a government corporation. On September 24, the Senate Energy & Natural Resources Committee held a hearing on the status of the Atomic Vapor Laser Isotope Separation (AVLIS) program. The Senate is reportedly preparing for a floor vote in October on the omnibus energy bill (S 1220), which includes as a separate title S 210, the uranium enrichment bill, which already passed the Senate on its own (See July 1991 Monthly Report, #275). In the House of Representatives, much of the activity was behind the scenes, as the staff of the Committees on Energy & Commerce and Interior worked on separate versions of enrichment restructuring legislation. The staff of Energy & Commerce has revised its bill, first circulated in August, and a new draft will be made public shortly. Both committees will hold hearings or mark up their bills in October.

Energy R&D Subcommittee Hearing on AVLIS

During its hearing on AVLIS, the Senate subcommittee on Energy Research & Development criticized DOE for its inability to deploy AVLIS technology after 18 years' effort and over $1 billion spent on research and development (R&D). Several key people testified at the hearing, including William Young, DOE Assistant Secretary for Nuclear Energy; Dr. James Davis, Associate Director of Lasers at Lawrence Livermore National Laboratory (LLNL); Dr. Robert Merriman, Vice President, Martin Marietta Energy Systems (MMES); and Joseph Farley, CEO of Southern Company.

Chairman Wendell Ford (D-KY) expressed disappointment about the decline in R&D funding and the delay in deployment resulting from cuts in the FY 1992 budget. He expressed his frustration at the delay, from 1997 to 2001, before a plant will be ready for operation. Young admitted that the FY 1992 budget cuts will cause a delay in AVLIS demonstration to March 1993. Dr. Davis said Congress may have intended to continue funding the program at FY 1991 levels, but in fact the FY 1992 budget cuts were harmful because of the termination of the Special Isotopic Separation (SIS) program that had provided some funding for the laser program. Mr. Farley criticized LLNL statements that FY 1992 budget cuts will cause the demonstration schedule to slip into 1993, indicating he does not think the schedule change is justified.

Sen. Ford encouraged DOE to create an alternative plan to compete in the world enrichment market if its legislative plan fails. Sen. Ford said without timely AVLIS deployment, the Japanese or the French will take advantage of the technology first. Mr. Young responded that DOE will continue to focus its efforts on enacting legislation restructuring the program into a government corporation. He reiterated administration policy that deployment of the technology and funding decisions will be left to the private sector.

Dr. Davis anticipates lower capital and power costs from AVLIS once it is built. He said "Two billion watts of energy are saved if existing GDPs are replaced by AVLIS and 20% less uranium is used to produce the same energy fuel compared to existing enrichment plants." The initial demonstration phase of laboratory testing of full-scale equipment began the week of September 24. These "life cycle tests" will continue for a year, leading to further reduction of costs, Davis claimed.

Dr. Davis testified that Cooperative Research and Development Agreements (CRADAs), which allow national labs to transfer technology to the private sector, are the only legal method for companies to gain access to AVLIS technology.

Davis said that until recently, AVLIS technology had been embargoed from CRADAs. DOE's interpretation of CRADAs is different from Dr. Davis'. According to DOE, the uranium enrichment aspects of AVLIS remain classified and unavailable to the private sector. In the future however, DOE may grant waivers for companies to use AVLIS-related technology.

Utilities continue to support AVLIS deployment and continued funding of its demonstration program. In response to a question from Sen. Ford about the private sector's willingness to build AVLIS, Mr. Farley said there are currently too many uncertainties for the private sector to take the risk. These uncertainties include licensing, environmental permitting, site selection, and completing the demonstration phase of the program. He said the House's proposed solution to the program's problems would be unworkable, because if the diffusion plants were separated from AVLIS, the new company would not have the customer base or track record necessary to secure financing for AVLIS construction.

In a related issue, the National Academy of Sciences recently completed a report on alternative uses of AVLIS technology. The report was sent to DOE on September 30 and should be made public soon.

NRC Rule on Licensing Enrichment Facilities

◇ On September 16, the Nuclear Regulatory Commission (NRC) published its proposed rule that conforms its regulations on licensing uranium enrichment facilities to the law Congress passed last year. That law requires enrichment facilities to be licensed under fuel cycle regulations rather than as production facilities. The law was passed at the urging of Louisiana Energy Services (LES) in order to codify the licensing process for the enrichment plant LES plans to build in the USA. Over the past year, LES has progressed on its license application, submitting the preliminary Safety Analysis Report (SAR) and Environment Report (ER) to the NRC staff last spring. Since then, LES has responded to questions from NRC staff about the SAR. The Atomic Safety Licensing Board has scheduled a prehearing for November 14, 1991 in Louisiana to discuss the SAR and ER. A draft of the Environmental Impact Statement is scheduled to be finished by October 15, 1991, with the final draft completed and published for public comment in the *Federal Register* by March 1, 1992.

INDUSTRY BRIEFS

Pathfinder To Purchase Reno Creek

Pathfinder Mines, Inc. has reached an agreement with Union Pacific Resources (UPR) to purchase UPR's Reno Creek in-situ leach (ISL) uranium property in northeast Wyoming. The purchase of this three-million pound reserve will add to Pathfinder's portfolio of properties in Wyoming, including open-pit mines in the Gas Hills and Shirley Basin, and the recently acquired Ruth and North Butte ISL properties.

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Korea Plans 13 More Reactors

Korea Electric Power Corporation (KEPCO) announced that under the government's revised long-term development program, 13 new commercial power reactors are planned for construction by 2006. The new reactors are in addition to the previously announced 700-MW CANDU PHWR and two 1,000-MW PWRs, and will include five 700-MWe PHWRs and eight 1,000-PWRs. In a country where peak electricity demand has averaged a 15% growth rate annually over the last 30 years, KEPCO plans that nuclear power will generate well over half of its total electricity by 2006.

US Reactors Set New Records

On August 30, Pacific Gas & Electric's Diablo Canyon-2 broke the light water reactor operation record by running continuously for 481 days. This broke the old record of 480 days set last July by GPU Nuclear's Three Mile Island-1.

But only a few days later, the Wolf Creek nuclear power plant near Burlington, Kansas surpassed that new record, and when it shut down for scheduled maintenance on September 19, it had reset the record at 487 continuous days. Wolf Creek is owned by Kansas Gas & Electric, Kansas City Power & Light, and Kansas Electric Power Cooperative.

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Yankee Rowe Closed Down

The 31-year old Rowe, Massachusetts, nuclear plant owned by Yankee Atomic Electric Company was shut down voluntarily by the operators on October 1 in response to a Nuclear Regulatory Commission staff recommendation. The staff recommended that the unit be shut down pending additional analysis on how the plant would respond under certain accident scenarios. The plant has been the center of attention lately, as Yankee Rowe was the first US plant to begin preliminary operating license extension procedures. The primary reason for the staff recommendation was concern over pressure vessel embrittlement. Yankee plans to address the concerns, and hopes to restart the plant in the future and to pursue license renewal.

Sequoyah Fuels Ordered Not To Restart

On October 4, the Nuclear Regulatory Commission (NRC) issued an order to Sequoyah Fuels Corporation prohibiting the restart of its Gore, Oklahoma, uranium conversion plant. The plant will not be allowed to reopen until a plan to improve the plant's health and safety program, as well as its environmental program, is submitted to and approved by the NRC. The plant had been shut down for a two-week routine maintenance period when the order was issued.

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Rössing Announces Further Production Cutbacks

In mid-September, Rössing Uranium Ltd. of Namibia announced that the company's Board had approved proposals to cut production down to five million pounds U_3O_8 annually, from its current level of 6.5 million pounds. Rössing has undertaken many cost-cutting measures in an effort to continue production through the presently depressed uranium market. The company's production capacity exceeds ten million pounds U_3O_8 per year.

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WORLD ASSOCIATION OF NUCLEAR OPERATORS

Background

One of the most significant steps toward assuring the future of nuclear energy took place in May 1989, with the signing of an agreement by nearly all the world's nuclear utilities establishing the World Association of Nuclear Operators (WANO). As a result of the well-publicized nuclear accidents at Three Mile Island in 1979 and Chernobyl in 1986, public concern about the safety of nuclear power was seen as a major obstacle to the growth of the industry. To regain their support of nuclear energy, it was apparent some significant effort was required to reassure the public. Consequently, the Institute of Nuclear Power Operators (INPO) was established in the United States in 1979, and the idea of WANO was conceived in 1987.

After two years of planning, the inaugural meeting of WANO was held in Moscow, USSR, with every utility that operates a nuclear power plant worldwide attending and becoming a member. Lord (Walter) Marshall of Goring, former Chairman of the CEGB, was approved as the Chairman of the WANO Governing Board, headquartered in London, England. William Lee, CEO and then-President of Duke Power Company, was elected as WANO's first President, and Thomas Eckered was designated director of the Coordinating Center, also in London.

At the second WANO Biennial General Meeting held in Atlanta, Georgia, USA, on April 21-23, 1991, Shoh Nasu, President of Tokyo Electric Power Company, was elected the organization's second President.

During his address to the second WANO General Meeting, Lord Marshall stressed the importance of worldwide cooperation among nuclear operators:

Unfortunately the world nuclear community did not grasp the full meaning of the Three Mile Island accident. We analyzed TMI as an American problem and we did not recognize the need for nuclear utilities worldwide to work together. At that time we did not recognize that we, the nuclear utilities everywhere, are bound together by a simple and stark mutual interest: we all are fearful that one utility will let us down, will permit a management error and allow another nuclear accident.

Unfortunately it took the horrific accident at Chernobyl to persuade us all of these facts. We then all realized that, taking the world as a whole, it is no good having 99 percent of the plants very safe if the other one percent have low standards. We simply cannot afford to have more accidents, anywhere, at even a small fraction of the Chernobyl scale.

Given this interdependence, it follows that the nuclear utilities worldwide have a collective responsibility to work together and help one another to improve the safety and reliability of the plants they operate.

Relationship to other Agencies

The concept for WANO grew from INPO, and, like INPO, it is an apolitical organization whose underlying philosophy is to encourage effective and improved communication between member utilities, so that the experience of one member benefits all members. The two organizations work closely together in complementary roles to promote excellence in and to maximize the safety and reliability of nuclear plant operations.

Headquartered in Atlanta, Georgia, USA, INPO serves the US nuclear industry as WANO serves the world nuclear community. INPO's computer and information systems are used by WANO for event reporting and data collection, and INPO's performance indicators form the basis for WANO's universal performance measurement system.

In the arena of inter-agency relationships, WANO has also developed a strong partnership with the International Atomic Energy Agency (IAEA). Since two of the three primary areas of responsibility for the IAEA are Nuclear Power and Safety, and Safeguarding Nuclear Materials and Facilities, IAEA Director General Hans Blix has supported WANO from its inception, believing that WANO would complement the experience and responsibilities of the IAEA. A Memorandum of Understanding between the two organizations was signed in June 1989, providing the route for an exchange of information. Lord Marshall summed up the

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agreement by stating that the intention is that the organizations will complement each other, not compete with each other.

This cooperation has proved highly beneficial to the nuclear power community, as IAEA deals on a governmental and regulatory level, while WANO operates on an operating utility level. WANO's charter stresses that it is not a governmental organization, and, as Lord Marshall stated, "We avoid interaction with governments to the maximum possible extent." By working together with IAEA, their efforts are bridging the gaps between governments and utilities.

Objectives

The mission of WANO is "to maximize the safety and reliability of the operations of nuclear power plants by exchanging information and encouraging communication, comparison, and emulation amongst its members." As Lord Marshall stated in his inaugural speech, "If we had had INPO at an early date, then TMI would never have happened. If we had had WANO at an early date, then Chernobyl would never have happened. It has taken those accidents to give us the commitment to work together."

To fulfill its mission, WANO has established a set of goals in which it strives to:

- Promote bilateral and multilateral exchanges and the use of operating experience information among members.
- Provide members with early notification and follow-up information on significant events at other plants.
- Screen and analyze events that occur at nuclear power plants worldwide in order to identify possible precursors of more serious events, and disseminate the lessons learned.
- Identify and promote the use of good practices among members.
- Encourage the comparison of operations and an emulation of high standards by WANO members through sponsorship of exchange visits. Encourage members to share methodologies through sponsorship of workshops and seminars.
- Collect, maintain, and apply the data on selected performance indicators to improve nuclear plant performance in areas such as nuclear plant safety and reliability, plant efficiency, and personnel safety.
- Maintain cooperative relationships with other international organizations, such as the IAEA, and work to promote safety and reliability of nuclear power plants.

Membership

Membership in WANO is entirely voluntary, as is the disclosure of information by individual members. Today, all 144 owners of the world's operating nuclear power plants have indicated their support of WANO's concept and become members of the organization.

A unique aspect of WANO's operation is that it has no regulatory authority or power to enforce recommendations or programs upon its members. WANO avoids any resemblance to a bureaucratic, regulatory body, and members view its programs solely as advice and inspiration to stimulate emulation among operators. Most utilities are in agreement that greater safety does not necessitate greater regulation, but does require a commitment by all operators to reduce risks. They realize that the long-term viability of the industry is dependent upon everyone's dedication to safety.

To avoid any political discrimination, WANO emphasizes participation of its members as *individual* members, rather than as representatives of a country or region. However, many utilities have joined WANO as a group. For example, when several European countries joined the organization as a group, it was totally acceptable, considering the worldwide acceptance of European countries as partners in the global scheme. On the other hand, if a utility were perceived as representative of a controversial country and not as an individual utility, it could be denied access to all the information and assistance it may need, possibly creating the weak link that WANO is trying to avoid.

Structure

WANO is headquartered in London, England, where Governing Board Chairman Lord Marshall and President Shoh Nasu orchestrate the international improvement in nuclear safety. As **Figure 1** illustrates, WANO has a non-centralized structure organized into a General Assembly, a Governing Board, Regional Centers, and a Coordinating Center. Each member utility can choose to associate itself with any one of the four regional centers—Moscow, Soviet Union; Atlanta, USA; Paris, France; or Tokyo, Japan.

Each regional center operates as a separate entity, with its own regional governing board, a director, and permanent

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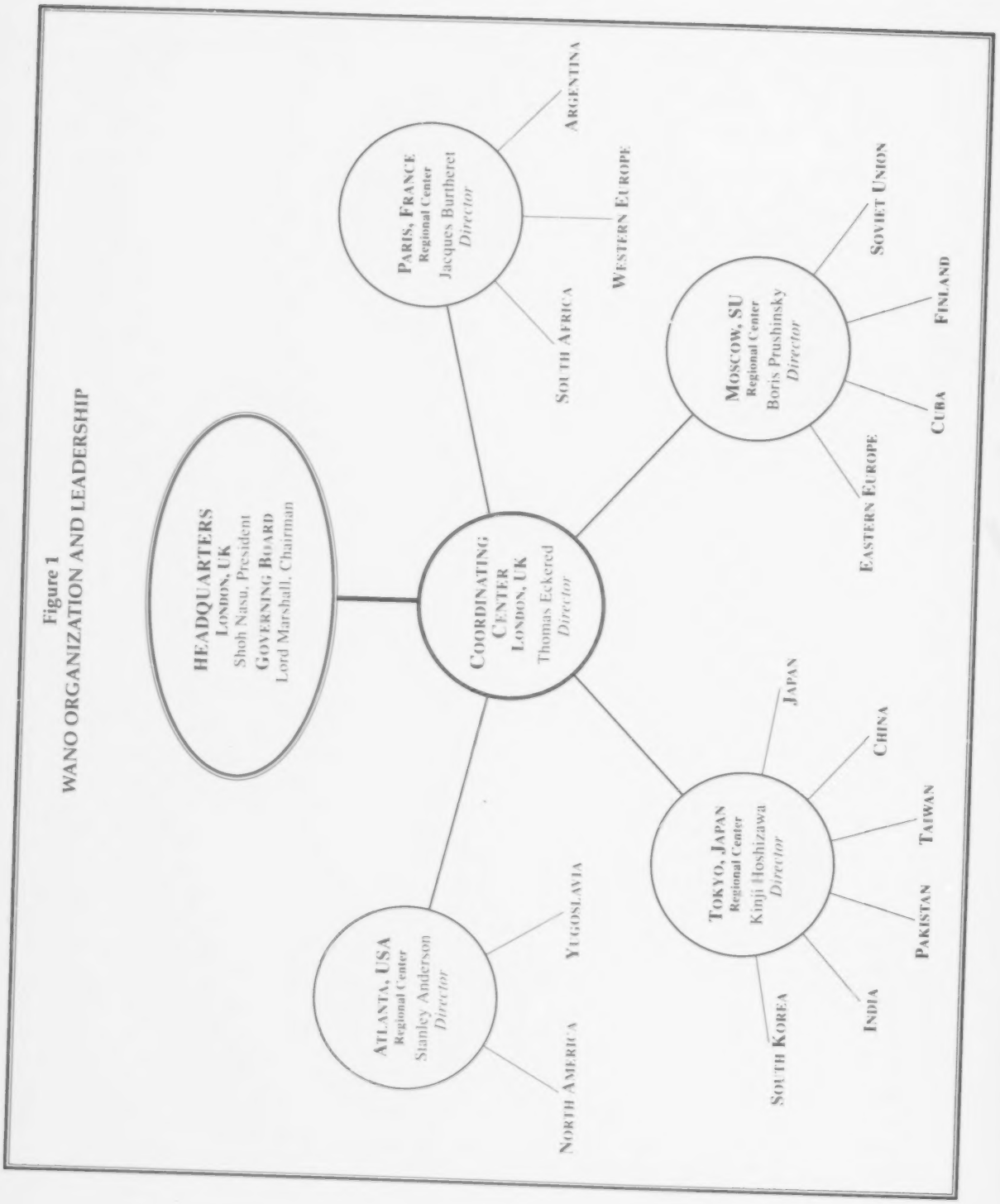
Figure 1
WANO ORGANIZATION AND LEADERSHIP



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staff. Staff at each center range from five to twenty permanent personnel, plus various loaned experts. The regional centers are responsible for most WANO activities and concentrate on development of activities characteristic of the region.

The Coordinating Center in London, United Kingdom, coordinates the activities of the regional centers, and also provides administrative support to the Governing Board and the membership. The Coordinating Center employs approximately ten people.

WANO is regulated by a Governing Board composed of members from each region. The Board meets three times a year, with the directors of the Regional Centers and the Coordinating Center attending as observers. The General Assembly is the forum for all members, representing over 400 nuclear power plants. It meets every two years, at which time a new president of WANO is elected. Its next meeting is scheduled for April 18-20, 1993 in Tokyo, Japan.

Major Programs

In 1989, Lord Marshall stressed that, while WANO is not involved in public relations or media endorsement of nuclear power, it is working to reduce the public's concerns about nuclear safety. To accomplish this, the organization has instituted numerous programs to improve the operational safety of the plants. These programs, described below, should result in improved safety performance and, thus, reassure the public that the world's utilities can properly manage nuclear energy.

Technical Exchange Visits and Seminars

The emphasis of the Exchange Visit Program is to facilitate the interaction of those persons from different operating companies who are directly involved in nuclear plant operations, such as plant managers and operating staff, who could best benefit from the development of open communication channels. As Eiji Takeuchi, General Manager of Nuclear Operations for Japan's Chubu Electric Power Company, stated in his address to the Atlanta conference:

> *... participation in the Exchange Visit Program is important because it exposes the participants to other methods and operational styles which may enhance the effectiveness of the participants' own management systems or techniques.*

Other conference speakers representing several countries and utilities echoed these sentiments and supported them with specific examples of operational enhancements. Eduardo Diaz Rio, Board Member of Spain's Union Electrica, described the benefit of staff exchanges between the Trillo (Spain), Gösgen (Switzerland) and Grohnde (Germany) pressurized water reactors (all of which use Kraftwerk Union technology):

> *These visits between plants of similar design have made it possible for the people responsible for the same areas in either installation to interface directly, allowing the solutions adopted to address similar problems...and better knowledge to be gained of the criteria to be taken into account for optimization of plant organization and operation.*

One of the initial priorities of the Exchange Visit Program, as outlined at the 1989 inaugural meeting, was to orchestrate a program of East-West exchange visits between the staff of nuclear plants. This goal has been realized to the extent that, by the end of 1990, every nuclear power plant in eastern Europe and the USSR had completed visits to the West and had received visits from the West. Each side is seeing merits and deficiencies in how the other operates. The intent of these exchange visits is not to impose Western methodologies on the East, but rather, to exchange information, practices, and procedures that improve safety.

Another type of exchange is through seminars where various experts can share and exchange their experiences and ideas on specific topics. The regional centers often arrange these seminars on the special topics of the region.

Performance Indicators

This program has been initiated to supply a quantitative indication of nuclear plant efficiency and reliability, as well as plant and personnel safety. The prime use of the indicators (described on next page) is to create a tool to enable plant management to monitor performance and progress, and thereby increase the safety and reliability of plant operations.

A great effort has been made to create a non-competitive system. This was done to avoid tempting the operating staff to compromise some facet of plant safety in an effort to improve plant performance, and thus improve an indicator "score".

All performance indicator data will be published annually and then distributed only to WANO members. Performance indicator data associated with specific nuclear plants are considered confidential, and release of data is prohibited without written authorization from the operating organization concerned.

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Performance Indicators

unit capability factor • unplanned capability loss factor • unplanned automatic scrams per 7,000 hours critical
safety system performance • thermal performance • fuel reliability • collective radiation exposure
volume of solid, low-level radioactive waste • chemistry index • industrial safety lost-time accident rate

The following principles for the performance indicators have been established.

- The most appropriate use of performance indicators by nuclear operating organizations is to establish performance trends, and subsequently, to shift priorities and resources as each organization deems appropriate to achieve its own desired balance among the performance indicators.
- Performance indicators should be included with other performance assessment tools and not relied upon as the sole basis for organizational decisions.
- Detail or process-related indicators should only be used by plant personnel having a detailed knowledge in the specific area the indicator is concerned with, thereby offering the staff added perspective. Organizations outside this staff should not use these particular indicators for plant comparisons.
- Performance indicators should not be used for ranking plants, since the indicators focus on limited areas of plant operations, and therefore do not create a source for judging the proper balance of all aspects of safe and reliable plant operation.

Thomas Eckered lauded the progress of this program in his address to the Atlanta convention, stating that 95 percent of the nuclear stations worldwide have begun reporting the WANO performance indicator data. However, since not all reporting stations have provided data on all ten indicators, the database is not complete.

Event Reporting and Analysis

To further facilitate the exchange of information among utilities, and to identify the potential causes of accidents, WANO has established programs for Event Notification Reports and Event Analysis Reports. Event Notification Reports (ENR) on significant events are issued to members by the regional center no more than five days after the event. WANO considers ENRs to be effective only if the ENRs are complete, confidential, and timely, as well as available for future reference. WANO demonstrated this timeliness philosophy in October 1989 when the initial ENR on Spain's Vandellos I fire was issued only six hours after the event.

The Event Analysis Report (EAR) provides a thorough description of the causes and consequences of an event, as well as corrective actions. The goal for the EAR is that it will be distributed within 12 weeks of the event. That period of time allows the members to analyze and comment on the ENRs they have received concerning the event. When there are recurring significant events, an Event Topic Report may be issued. All reports are for the use of members only, and are not written for, nor distributed to, the public.

Direct contact between members is crucial to WANO's event reporting and analysis. The WANO data network, currently using the INPO computer system in Atlanta, is one of the first occurrences of real-time, on-line communications between the East and West. The WANO Moscow Center has the only private data communications line in the Soviet Union that goes directly to the West without going through a government office. Up to now, the flow of information has been primarily from West to East as the Soviet system was not oriented to writing and updating procedures. Soviet operators were required to carry most of the operational knowledge in their heads, and therefore have been amazed at the extent of documentation common to Western plants.

Good Practices

The Good Practices program identifies procedures that qualify as good practices and are appropriate for members to exchange. Such a task is not made easy by the numerous technical, licensing, cultural, and management variations between different plants, and between different countries.

Staff Exchanges

The exchange of plant staff, for limited periods and within a region, is done to encourage and provide "cross-fertilization" of different approaches to operational safety.

Area Experts

Each Regional Center encourages and assists in the formation of small groups of experts in specific areas, and maintains lists of recognized experts.

Peer Review System

WANO is striving to expand its sphere of influence and its effectiveness by planning for the implementation of a peer review system. Although details have yet to be resolved, such a review system is likely to closely approximate, on a worldwide level, the INPO peer review system that is currently utilized in the USA. Under the INPO system, industry experts are loaned to INPO by their utilities for the purpose of evaluating plant performance and to make recommendations that would enhance plant operations.

At the Atlanta conference, outgoing WANO President William Lee cited the example of INPO's effectiveness with performance reviews, stating the only way for WANO to achieve the desired results in this arena is for members to volunteer for focused peer reviews, thus allowing the development of a set of universal performance criteria.

The major obstacle to such a system on a worldwide level is overcoming the cultural diversity present in the nuclear community. Quite commonly, individual operators tend to be protective and reluctant to accept any approach that is perceived as relinquishing any control.

Special VVER Project

In 1990, a special project was established to offer practical assistance to utilities in Eastern Europe and the Soviet Union for the improvement of VVER 440, Model 230, nuclear reactors. This model is the earliest production reactor the Soviet Union produced, and lags behind current world standards for safety systems. WANO suggests what retrofits are required and the order of priority for their installation. The main responsibility for this project is vested in the Paris and Moscow regional centers. The project has been quite successful, providing specific steps to improve all first-generation VVERs. For example, two expert groups are working together to finalize the backfit program, and should complete the program by the end of 1991.

In a parallel effort, an IAEA Operational Safety and Review Team (OSART) evaluated Bulgaria's Kozloduy station, containing four, first-generation 440-MWe VVERs, and because of some severe safety concerns, recommended that the station no longer continue operation. Even prior to the release of the OSART report, it was known that Bulgaria's reactors were in need of significant operational and safety upgrades, and a consortium of western European countries already had agreed to provide US$13 million in assistance to bring the Kozloduy station up to world safety standards. One reactor already has been shut down for safety upgrades and a second will be shut down in October. WANO, working with the IAEA and the European consortium, will coordinate the safety improvement efforts in Bulgaria. This effort exemplifies WANO's commitment to cooperating with many organizations to achieve their mutual goals of global nuclear safety.

Conclusion

WANO's goals can be fully achieved only if all nuclear plant operators worldwide can obtain the benefits of WANO's programs. WANO strives to maximize the sharing of information among its members, regardless of geographical location or political affiliation, thereby never allowing the lack of such information to compromise an operator's ability to prevent a serious event.

James Watkins, US Secretary of Energy, stated in his address to the WANO Atlanta conference,

> *The WANO mission remains the essential ingredient to nuclear power's prospectus... You have it within your ability to secure the nuclear power option for the future, or—by your failure to educate the public, to operate safely, and thereby inspire public confidence—you could, unfortunately, let the nuclear option slip away...[WANO is] a monumental step in the right direction... Through this fine organization, it's clear that safety in the nuclear work place has achieved the level of worldwide attention that it demands, and that our future requires. But in my opinion, we only have a few more years to prove to the world that nuclear power is still needed, that we know what we're doing to manage this technology safely, and that we can inculcate sufficient scientific literacy into our citizenry so that they themselves can separate scientific fact from the fiction of political hype which has become the most elusive threat to this vital source of world energy.*

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NUEXCO

GOVERNMENT STATISTICS

HISTORICAL GOVERNMENT STATISTICS

Each month for more than ten years, NUEXCO has published selected statistics released by the governments of Australia, Canada, South Africa, and the United States. The following tables are provided as a convenient reference to our readers and give complete historical data by month of most of our regularly printed government statistics. As governments often revise statistics and change the base year for an index, all the data have been updated since we last published the complete tables (Monthly Report #233 and #236), and all indices have been adjusted to reflect any changes of base year.

The tables show an average for each year. Due to independent rounding, the monthly figures may not equate exactly to the published average. The sources for all the data are given in the footnotes to the tables published in the Government Statistics section of each Monthly Report.

AUSTRALIA

PRICE INDEX OF MATERIALS USE IN MANUFACTURING – All Groups (1984/1985=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1968	—	—	—	—	—	—	—	24.8	24.3	23.9	23.8	23.5	23.6
1969	24.5	23.8	24.2	24.3	24.6	24.4	24.5	24.9	24.9	24.8	24.5	24.5	24.6
1970	24.5	24.6	24.7	24.9	25.1	25.0	24.8	24.7	24.2	24.1	23.9	23.7	23.9
1971	24.5	23.9	24.1	24.2	24.3	24.4	24.6	25.1	25.2	24.9	24.7	24.4	24.3
1972	25.5	24.5	24.8	24.8	24.6	24.9	24.9	25.7	26.3	26.4	26.3	26.3	26.3
1973	30.0	26.4	28.5	29.7	29.2	29.4	29.7	30.4	31.4	31.4	31.1	31.4	32.0
1974	34.3	32.6	33.7	33.7	34.4	34.5	33.8	35.2	35.3	34.0	34.5	34.5	34.9
1975	36.3	34.9	34.9	35.2	35.9	35.8	35.4	35.9	36.5	37.3	37.9	37.9	38.1
1976	40.7	38.8	38.9	39.0	39.1	39.5	40.4	41.2	42.0	42.2	42.2	41.4	43.2
1977	46.4	44.3	45.2	46.1	46.6	46.6	46.8	46.7	46.9	47.1	46.8	46.2	47.0
1978	52.0	47.7	48.6	48.4	49.1	49.4	51.2	52.3	53.5	55.1	55.6	56.1	56.9
1979	69.5	59.5	61.1	63.7	66.1	69.6	71.2	72.0	70.8	73.0	74.7	74.9	77.1
1980	83.1	82.1	83.4	82.1	79.3	81.0	81.8	84.0	85.0	84.6	84.1	84.6	84.9
1981	85.9	86.4	86.1	85.7	85.6	85.3	87.0	86.4	87.1	86.5	85.1	84.8	84.5
1982	89.0	85.7	85.8	87.0	88.9	88.9	88.8	89.3	89.9	90.6	91.4	90.7	90.5
1983	96.9	93.1	93.5	95.9	98.3	100.1	100.3	98.6	97.3	97.3	96.0	95.5	96.4
1984	98.0	96.4	97.2	97.5	97.6	97.5	97.7	98.6	99.7	99.4	98.6	98.3	98.0
1985	107.3	98.8	100.4	104.0	106.6	109.7	110.8	110.8	110.2	108.7	108.4	109.4	109.9
1986	101.5	109.5	108.7	99.4	94.2	93.5	95.6	97.8	97.9	105.4	105.9	104.9	105.2
1987	108.9	106.2	108.9	108.4	108.3	108.1	108.1	108.7	110.5	109.3	108.6	110.0	111.9
1988	111.8	112.4	112.3	112.3	112.4	114.1	114.0	111.9	112.1	112.8	110.4	109.1	108.3
1989	117.0	110.6	111.2	114.9	117.5	118.6	119.9	120.1	119.2	117.7	117.8	118.0	118.2
1990	123.4	119.2	120.8	121.5	119.9	118.9	116.6	116.4	122.4	128.2	134.1	133.7	128.8

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AUSTRALIA *(continued)*

CONSUMER PRICE INDEX (1980/1981=100) – for the quarter ending:

Year	Average	Mar	June	Sept	Dec
1967	32.4	31.9	32.2	32.7	32.8
1968	33.3	32.9	33.2	33.3	33.6
1969	34.2	33.9	34.1	34.3	34.6
1970	35.6	34.9	35.4	35.6	36.3
1971	37.7	36.7	37.3	38.0	38.9
1972	39.9	39.3	39.6	40.2	40.6
1971	43.7	41.5	42.9	44.4	46.0
1974	50.3	47.1	49.1	51.6	53.3
1975	57.9	55.4	57.4	57.8	61.0
1976	65.7	62.8	64.4	65.9	69.8
1977	73.8	71.4	73.1	74.5	76.3
1978	79.7	77.3	78.8	80.4	82.2
1979	86.9	83.6	85.8	87.8	90.4
1980	95.8	92.4	95.0	96.8	98.8
1981	105.0	101.1	103.4	105.5	109.9
1982	116.7	111.8	114.5	118.5	122.0
1983	128.5	124.7	127.3	129.4	132.5
1984	133.6	132.0	132.3	134.0	135.9
1985	142.6	137.8	141.1	144.2	147.1
1986	155.5	150.5	153.0	157.0	161.5
1987	168.7	164.7	167.2	170.0	172.9
1988	180.9	176.0	179.0	182.4	186.2
1989	194.6	188.0	192.6	197.0	200.7
1990	208.7	204.1	207.4	208.9	214.5

AWARD RATES OF PAY INDEXES–Adult Males In Mining, Wage Earners Weekly Rates (June 1985=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	15.8	15.6	15.6	15.6	15.7	15.7	15.7	16.0	16.0	16.0	16.0	16.1	16.1
1968	16.7	16.1	16.2	16.2	16.2	16.7	16.8	16.8	16.8	16.9	17.4	17.3	17.4
1969	17.6	17.4	17.4	17.4	17.5	17.5	17.5	17.6	17.6	17.6	17.7	17.7	18.1
1970	18.4	18.2	18.2	18.3	18.3	18.3	18.3	18.3	18.4	18.3	18.6	18.7	18.7
1971	20.3	19.6	19.6	19.6	19.8	19.9	20.0	20.1	20.2	20.9	21.0	21.1	21.2
1972	21.8	21.1	21.1	21.2	21.3	22.0	22.1	22.2	22.1	22.2	22.2	22.3	22.0
1973	24.3	22.5	23.3	23.2	23.3	24.4	24.6	24.7	24.9	25.0	25.1	25.1	25.2
1974	33.2	25.3	26.2	30.6	31.2	34.2	34.4	34.7	34.5	36.0	36.4	36.7	37.7
1975	40.6	37.5	37.7	37.8	37.9	39.4	39.3	39.2	39.2	44.5	44.8	44.8	44.8
1976	49.3	45.1	48.0	48.0	48.0	49.2	49.4	49.5	50.4	50.5	50.4	51.4	51.5
1977	54.7	51.7	52.3	53.8	53.9	55.0	54.9	55.0	55.9	55.9	55.9	55.9	56.7
1978	58.2	56.8	57.7	57.7	57.6	57.5	58.2	58.2	58.2	58.3	58.4	58.4	61.0
1979	63.2	61.2	61.2	61.5	61.7	62.0	64.0	64.1	64.4	64.6	64.5	64.4	64.9
1980	69.6	68.5	68.4	68.4	68.5	68.5	68.3	70.7	70.4	70.4	70.7	70.8	71.3
1981	76.1	73.8	73.7	73.6	73.5	76.1	76.3	76.4	76.5	76.5	76.7	77.7	82.7
1982	86.4	83.6	84.5	84.7	84.7	84.9	85.6	87.5	88.0	88.1	88.1	88.2	88.7
1983	89.9	88.7	88.8	88.8	89.0	89.0	89.0	88.9	88.9	88.8	92.8	92.8	92.7
1984	96.0	92.8	92.7	92.6	96.5	97.0	97.2	97.2	97.2	97.2	97.2	97.5	97.5
1985	100.1	97.5	97.7	97.7	100.2	100.0	100.0	100.0	100.0	100.0	100.0	103.8	103.8
1986	104.9	103.7	103.7	103.7	103.7	103.7	103.7	106.1	106.1	106.1	106.1	106.1	106.1
1987	112.9	110.6	110.6	113.0	113.0	113.0	113.1	113.1	113.2	113.5	113.7	113.7	114.0
1988	115.4	112.6	114.5	114.5	114.5	114.5	114.5	114.8	115.7	116.9	117.3	117.3	117.5
1989	126.0	123.3	123.4	125.0	125.4	125.6	125.8	126.9	127.0	127.1	127.3	127.7	128.0
1990	129.6	128.3	128.3	128.7	129.0	129.2	129.8	129.9	130.0	130.2	130.4	130.4	130.6

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GOVERNMENT STATISTICS

HISTORICAL GOVERNMENT STATISTICS

CANADA

INDUSTRIAL PRODUCTS PRICE INDEX: All Commodities (1986=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	27.8	27.5	27.6	27.7	27.7	27.8	27.8	27.8	27.8	27.8	27.8	27.8	28.0
1968	28.3	28.1	28.2	28.3	28.2	28.2	28.3	28.3	28.3	28.4	28.4	28.5	28.7
1969	29.4	28.9	29.1	29.3	29.3	29.4	29.5	29.4	29.4	29.5	29.5	29.6	29.8
1970	30.1	30.1	30.2	30.3	30.3	30.3	30.1	30.0	29.9	29.9	30.0	30.0	30.0
1971	30.7	30.2	30.3	30.4	30.6	30.6	30.7	30.9	30.9	30.9	30.9	30.9	31.1
1972	32.1	31.4	31.5	31.7	31.9	31.9	31.9	32.1	32.1	32.3	32.4	32.6	32.9
1973	35.6	33.4	33.7	34.2	34.5	35.0	35.3	35.8	36.9	36.8	37.0	37.2	37.7
1974	42.4	39.0	39.6	40.2	41.1	41.6	42.0	42.9	43.6	43.9	44.5	45.2	45.2
1975	47.2	45.5	46.1	46.1	46.5	46.9	46.9	47.2	47.7	48.0	48.3	48.3	48.4
1976	49.6	48.7	48.7	48.9	49.1	49.4	49.6	49.7	49.8	50.2	50.2	50.3	50.8
1977	53.5	51.4	51.8	52.5	53.1	53.4	53.4	53.8	53.9	54.3	54.6	54.8	55.0
1978	58.4	55.7	56.1	56.6	57.4	57.7	58.0	58.4	58.9	59.5	60.7	61.0	61.2
1979	66.9	62.9	64.0	64.6	65.3	65.9	66.3	67.1	67.6	68.6	69.8	70.1	70.7
1980	75.9	73.4	73.9	73.5	74.0	74.4	74.8	75.6	76.6	77.3	78.6	79.2	79.3
1981	83.6	80.4	80.9	81.4	82.2	82.9	83.7	84.3	84.9	85.1	85.9	85.7	86.0
1982	89.0	86.7	87.3	87.9	88.5	89.0	89.5	89.6	89.5	90.1	90.2	89.9	90.1
1983	92.1	90.1	90.1	91.0	91.5	91.8	92.5	92.8	93.0	92.9	93.2	93.1	93.6
1984	96.3	94.5	94.8	95.6	96.1	96.1	96.2	97.1	97.0	96.9	96.9	97.2	97.5
1985	99.0	98.1	98.2	98.8	98.7	99.0	99.0	99.0	98.8	99.0	99.3	99.6	100.1
1986	100.0	100.2	100.0	99.8	99.7	99.1	99.3	99.5	100.0	100.2	100.5	100.8	100.6
1987	102.8	101.1	100.8	100.8	101.5	102.3	102.6	103.1	103.6	103.8	104.1	104.7	105.0
1988	107.2	105.9	105.5	105.8	106.3	106.8	107.1	107.6	108.0	108.0	108.1	108.8	108.8
1989	109.4	109.5	109.4	109.9	109.8	109.8	109.9	109.7	109.5	109.2	109.0	108.8	108.5
1990	109.7	108.7	109.5	109.3	109.1	109.6	109.4	109.1	109.3	110.2	110.6	110.9	111.0

CONSUMER PRICE INDEX: All Items (1986=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	27.6	27.0	27.0	27.1	27.3	27.4	27.6	27.8	27.9	27.9	27.9	27.9	28.1
1968	28.7	28.2	28.2	28.3	28.5	28.5	28.6	28.8	28.9	28.9	29.0	29.2	29.2
1969	30.0	29.3	29.3	29.5	29.8	29.9	30.1	30.2	30.3	30.3	30.3	30.4	30.6
1970	31.0	30.7	30.7	30.8	31.0	31.0	31.0	31.2	31.1	31.1	31.1	31.1	31.0
1971	31.9	31.1	31.3	31.3	31.6	31.7	31.8	32.0	32.3	32.2	32.3	32.3	32.6
1972	33.4	32.7	32.8	32.9	33.0	33.1	33.1	33.5	33.8	33.9	33.9	34.0	34.2
1973	36.0	34.5	34.7	34.8	35.2	35.4	35.8	36.1	36.6	36.8	36.9	37.2	37.4
1974	39.9	37.7	38.1	38.4	38.7	39.4	39.9	40.1	40.6	40.8	41.2	41.6	42.0
1975	44.2	42.2	42.5	42.7	43.0	43.4	44.0	44.6	45.0	45.1	45.5	45.9	46.0
1976	47.5	46.2	46.5	46.6	46.8	47.2	47.4	47.6	47.8	48.0	48.3	48.5	48.7
1977	51.3	49.1	49.5	50.1	50.4	50.8	51.1	51.6	51.8	52.1	52.6	52.9	53.3
1978	55.9	53.5	53.9	54.5	54.6	55.4	55.8	56.6	56.7	56.6	57.2	57.6	57.8
1979	61.0	58.2	58.8	59.5	59.9	60.5	60.8	61.3	61.5	62.0	62.5	63.1	63.4
1980	67.2	63.8	64.4	65.0	65.4	66.2	66.9	67.4	68.1	68.7	69.3	70.2	70.5
1981	75.5	71.5	72.2	73.1	73.7	74.3	75.5	76.1	76.7	77.3	78.0	78.7	79.1
1982	83.7	79.6	80.6	81.6	82.0	83.2	84.0	84.4	84.8	85.3	85.8	86.4	86.4
1983	88.5	86.2	86.6	87.5	87.5	87.7	88.7	89.0	89.5	89.5	90.0	90.0	90.3
1984	92.4	90.8	91.3	91.5	91.8	91.9	92.3	92.8	92.8	92.9	93.1	93.7	93.7
1985	96.0	94.1	94.7	94.9	95.3	95.5	96.1	96.4	96.5	96.7	97.0	97.4	97.8
1986	100.0	98.3	98.6	98.9	99.0	99.5	99.6	100.4	100.7	100.7	101.2	101.7	101.9
1987	104.4	102.1	102.6	103.0	103.5	104.1	104.4	105.1	105.2	105.2	105.6	106.0	106.1
1988	108.6	106.3	106.7	107.3	107.6	108.3	108.5	109.1	109.4	109.5	110.0	110.3	110.3
1989	114.0	110.9	111.6	112.2	112.5	113.7	114.3	115.0	115.1	115.3	115.7	116.1	116.0
1990	119.4	116.9	117.6	118.0	118.1	118.7	119.2	119.8	119.8	120.2	121.2	121.9	121.8

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CANADA *(continued)*

WAGE-EARNER DATA: AVERAGE HOURLY EARNINGS (C$)–Uranium Mines (SIC 057)

Year	Avera...	...	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1983	17.2...	...	– . –	16.80	16.84	17.03	17.03	16.49	16.94	17.67	17.74	17.83	17.85
1984	17.89	...	17.79	18.06	18.07	18.49	18.09	17.82	17.25	17.69	17.65	18.05	17.96
1985	18.53	...06	18.79	18.25	18.64	19.42	18.50	18.15	17.08	18.54	18.75	19.06	19.08
1986	19.38	18.16	19.53	19.05	19.39	19.55	19.81	19.52	18.40	19.3...	19.98	20.12	19.68
1987	20.12	19.53	20.33	20.04	20.47	20.50	20.23	19.75	19.64	19.85	20.06	20.47	20.62
1988	20.91	20.70	20.94	20.55	20.03	20.92	21.04	20.94	20.38	20.88	21.39	21.51	21.69
1989	21.97	21.22	22.05	21....	22.37	21.89	21.89	21.67	20.97	21.97	22.26	22.60	22.80
1990	22.90	21.88	22.51	22.52	23.17	23.28	21.85	20.92	23.88	24.41	23.11	23.38	23.90

WAGE-EARNER DATA: AVERAGE HOURLY EARNINGS (C$)–Metal Mines (SIC 051-059)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1983	14.86	– . –	– . –	14.93	14.49	14.59	14.69	14.44	14.45	14.99	15.37	15.39	15.21
1984	15.85	15.37	15.69	15.62	15.93	15.74	15.58	15.82	15.46	16.06	16.25	16.23	16.49
1985	16.47	16.23	16.51	16.31	16.54	16.61	16.30	16.37	16.13	16.65	16.61	16.76	16.67
1986	16.70	16.32	16.67	16.75	16.79	16.79	16.73	16.44	16.27	16.72	16.92	17.12	16.90
1987	17.15	16.93	17.20	17.14	17.38	17.12	16.94	16.73	16.98	17.20	17.31	17.50	17.31
1988	18.51	17.54	17.97	17.88	18.50	18.21	18.31	18.45	18.21	18.73	19.32	19.61	19.36
1989	20.02	19.45	19.51	19.65	19.80	20.02	20.02	19.60	19.76	20.61	20.71	20.64	20.50
1990	20.93	20.39	20.63	20.75	21.20	20.55	20.63	20.18	20.51	21.19	21.39	21.83	21.89

WAGE-EARNER DATA: AVERAGE HOURLY EARNINGS (C$)–Mines, Quarries, and Oil Wells (SIC 051-099)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1983	14.18	– . –	– . –	14.20	14.03	14.0...	13.97	13.84	13.80	14.31	14.55	14.57	14.56
1984	14.97	14.64	14.80	14.72	15.00	...	...0	14.82	14.82	15.24	15.16	15.33	15.49
1985	15.56	15.49	15.49	15.46	15.69	...	...0	15.31	15.20	15.61	15.59	15.77	15.90
1986	15.76	15....	15.88	15.82	15.84	1...	...33	15.37	15.35	15.67	16.00	16.13	16.08
1987	16.11	...	16.21	16.15	16.26	15.9...	15.70	15.63	15.87	16.25	16.33	16.50	16.37
1988	16.95	16....	17.07	16.78	15.92	17.03	16.95	16.85	16.68	16.91	17.31	17.65	17.65
1989	18.41	18....	18.26	18.35	18.40	18.17	18.17	17.96	18.24	18.73	18.74	18.78	18.93
1990	19.12	19.03	19.14	19.17	19.46	19.01	18.96	18.66	18.59	18.94	19.12	19.48	19.88

WAGE-EARNER DATA: AVERAGE HOURLY EARNINGS (C$)–Metal Rolling, Casting and Extruding (SIC 298)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1983	10.67	– . –	– . –	10.12	10.69	10.40	10.42	10.41	10.67	10.93	10.62	11.25	11.22
1984	11.11	11.48	11.46	11.48	10.95	10.76	11.01	10.78	10.95	11.14	11.20	11.13	11.01
1985	11.85	11.44	11.70	11.62	11.89	11.91	11.80	11.83	11.98	12.06	12.21	11.99	11.74
1986	12.28	12.16	12.27	12.27	12.33	12.41	12.56	12.42	11.98	12.12	12.27	12.35	12.25
1987	12.58	12.58	12.66	12.58	11.99	12.44	12.77	12.52	12.65	12.57	13.01	12.63	12.54
1988	13.17	12.82	13.01	13.10	13.32	13.02	13.03	12.93	13.25	13.44	13.46	13.41	13.22
1989	13.71	13.75	13.79	13.62	13.57	13.76	13.76	13.57	13.52	13.68	13.99	13.93	13.62
1990	14.62	13.99	14.49	14.99	14.83	14.71	14.69	14.34	14.50	14.48	14.78	14.93	14.70

WAGE-EARNER DATA: AVERAGE HOURLY EARNINGS (C$)–Chemicals and Chemical Products Industries (SIC 372-379)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1983	11.09	– . –	– . –	10.91	10.94	10.89	10.97	10.96	11.11	11.21	11.22	11.30	11.43
1984	11.68	11.61	11.43	11.50	11.55	11.57	11.60	11.74	11.70	11.82	11.88	11.88	11.91
1985	12.12	11.96	11.98	11.94	11.96	12.07	12.06	12.05	12.11	12.18	12.24	12.40	12.50
1986	12.58	12.43	12.36	12.45	12.45	12.42	12.40	12.43	12.61	12.81	12.85	12.84	12.90
1987	13.20	12.89	13.11	13.02	13.27	13.19	12.88	12.98	13.03	13.40	13.37	13.53	13.75
1988	13.77	13.73	13.69	13.62	13.66	13.58	13.76	13.73	13.71	14.05	13.90	13.91	13.92
1989	14.16	13.82	13.89	14.10	14.16	14.27	13.22	12.98	14.30	14.83	14.77	14.75	14.77
1990	15.28	14.78	15.03	15.07	14.93	15.06	15.05	15.20	15.33	15.63	15.59	15.73	16.01

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GOVERNMENT STATISTICS

HISTORICAL GOVERNMENT STATISTICS

SOUTH AFRICA

AVERAGE DECLARED WORKING COSTS per Metric Tons of Gold Ore Milled (Rand)—For the quarter ending

Year	Average	Mar	June	Sept	Dec	Year	Average	Mar	June	Sept	Dec
1967	6.2	6.1	6.2	6.2	6.2	1979	30.16	28.60	29.44	30.71	31.89
1968	6.3	6.2	6.2	6.3	6.4	1980	35.50	33.65	34.48	36.19	37.69
1969	6.4	6.4	6.4	6.4	6.5	1981	41.87	39.26	40.41	43.28	44.52
1970	7.34	7.28	7.32	7.34	7.43	1982	47.23	45.49	45.77	48.04	49.61
1971	7.88	7.65	7.84	7.91	8.12	1983	51.88	50.35	50.51	52.92	53.70
1972	8.79	8.49	8.66	8.83	9.17	1984	58.95	55.30	56.95	60.64	62.92
1973	10.50	9.39	10.29	10.95	11.36	1985	68.70	64.48	67.42	70.47	72.43
1974	13.18	11.98	12.60	13.73	14.41	1986	80.18	75.76	77.65	81.94	85.38
1975	16.70	15.64	16.40	17.05	17.69	1987	95.01	88.17	90.74	100.79	100.34
1976	19.30	18.51	19.06	19.39	20.25	1988	106.69	102.90	103.59	109.27	110.98
1977	23.86	23.02	23.19	23.85	25.37	1989	116.65	112.29	113.76	119.76	120.79
1978	27.13	26.70	26.19	27.41	28.23	1990	129.37	126.74	128.25	129.46	133.02

TONNAGE-WEIGHTED INDEX OF WORKING COSTS per Metric Tons of Gold Ore Milled (March 1982=100)
For the quarter ending

Year	Average	Mar	June	Sept	Dec	Year	Average	Mar	June	Sept	Dec
1982	103.9	100.0	100.5	[illegible]7	109.2	1987	223.1	197.1	203.5	224.7	267.0
1983	115.0	111.2	111.9	[illegible]	119.6	1988	241.1	232.4	234.0	246.5	251.4
1984	130.3	123.1	126.2	133.2	138.6	1989	273.0	262.8	267.0	280.2	282.0
1985	151.7	142.4	148.9	155.3	160.1	1990	305.3	296.3	299.9	312.6	312.4
1986	177.9	167.8	172.0	181.8	189.9						

CONSUMER PRICE INDEX (1985=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	17.0	16.8	16.8	16.9	16.9	17.0	17.0	17.1	17.2	17.2	17.1	17.1	17.1
1968	17.3	17.1	17.1	17.2	17.2	17.2	17.2	17.3	17.4	17.4	17.4	17.5	17.5
1969	17.8	17.5	17.5	17.7	17.7	17.8	17.8	17.8	17.8	17.8	18.1	18.2	18.2
1970	18.8	18.2	18.3	18.4	18.7	18.7	18.8	18.8	18.9	19.0	19.1	19.1	19.1
1971	19.9	19.2	19.2	19.4	19.7	19.8	19.9	20.0	20.1	20.2	20.3	20.4	20.5
1972	21.2	20.5	20.6	20.7	20.8	20.9	21.0	21.1	21.4	21.7	21.8	21.8	22.0
1973	23.2	22.2	22.4	22.[illegible]	22.8	23.0	23.1	23.3	23.4	23.6	23.8	24.0	24.1
1974	25.9	24.2	24.5	24.9	25.0	25.2	25.6	26.0	26.4	26.8	27.1	27.3	27.5
1975	29.4	27.9	28.1	28.3	28.7	28.9	29.3	29.6	29.9	30.1	30.4	30.6	30.8
1976	32.6	31.0	31.2	31.6	31.9	32.2	32.6	32.8	33.2	33.5	33.7	33.8	34.1
1977	36.3	34.4	34.9	35.3	35.6	35.8	36.1	36.5	37.0	37.3	37.5	37.7	37.9
1978	40.3	38.3	38.6	38.7	39.1	39.3	39.4	41.1	41.3	41.6	41.9	42.1	42.3
1979	45.6	42.7	42.9	43.7	44.0	44.2	44.8	46.4	47.1	47.6	47.9	48.0	48.2
1980	51.9	48.6	49.1	49.4	49.9	50.5	51.3	52.1	52.6	53.7	54.7	55.2	55.8
1981	59.8	56.1	57.0	57.4	57.7	58.1	58.8	60.1	61.1	62.1	62.7	63.1	63.6
1982	68.6	63.9	64.7	66.1	67.2	67.7	68.2	68.8	69.6	70.8	71.7	72.1	72.3
1983	77.1	73.2	74.4	75.2	75.8	76.3	76.6	77.2	78.0	78.6	79.3	79.8	80.3
1984	86.0	80.7	81.8	82.8	84.1	84.7	85.6	86.7	87.3	88.1	89.3	90.3	90.9
1985	100.0	92.0	94.9	95.3	97.3	98.4	99.6	100.5	101.6	102.7	104.3	105.6	107.7
1986	118.6	111.0	112.0	113.3	[illegible].4	115.6	116.5	118.8	120.6	122.9	124.2	125.9	127.2
1987	137.7	128.9	130.3	132.4	134.1	135.6	136.6	138.2	140.2	142.0	143.6	144.8	145.9
1988	155.4	147.2	148.2	150.2	151.9	153.1	153.6	155.3	157.4	159.6	161.3	162.7	164.2
1989	178.2	166.8	168.2	170.9	173.1	175.9	177.7	179.3	181.8	183.4	185.1	187.0	189.4
1990	203.8	192.0	193.3	196.4	198.3	200.4	201.8	203.2	206.5	209.7	211.1	215.6	217.1

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SOUTH AFRICA *(continued)*

PRODUCER PRICE INDEX (1980=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1971	17.0	16.5	16.5	16.6	16.8	16.9	17.0	17.1	17.1	17.2	17.3	17.3	17.3
1972	18.3	17.4	17.7	17.8	17.9	18.0	18.2	18.4	18.6	18.8	19.0	19.1	19.2
1973	20.5	19.4	19.7	20.0	20.1	20.4	20.6	20.8	21.2	21.4	21.6	21.9	22.1
1974	24.5	22.3	22.6	22.8	23.3	23.8	24.5	24.8	25.6	25.8	25.9	26.2	26.4
1975	28.7	27.0	27.3	27.3	27.5	28.0	28.3	28.8	29.5	29.6	30.1	30.5	30.9
1976	33.1	30.9	31.4	31.4	31.9	32.5	32.8	33.2	33.9	34.4	34.6	34.7	35.3
1977	37.3	35.5	36.0	36.2	36.5	37.0	37.5	37.8	38.0	38.1	38.3	38.5	38.7
1978	41.0	39.5	39.7	39.7	40.1	40.5	40.7	41.0	41.5	41.9	42.3	42.7	42.8
1979	47.3	43.3	43.7	44.2	44.6	45.9	46.9	48.4	49.2	49.6	50.1	50.5	50.8
1980	55.2	51.9	51.9	52.2	52.9	53.6	54.3	55.4	56.5	57.4	58.3	59.1	59.3
1981	62.7	59.6	60.3	60.3	60.8	61.3	61.9	62.8	64.0	64.5	65.2	65.9	66.2
1982	71.4	67.0	68.1	68.2	69.5	70.3	70.9	71.6	72.8	73.2	74.7	75.4	75.6
1983	79.0	76.1	76.8	77.3	77.8	78.8	78.5	78.7	80.1	80.3	80.8	80.9	81.5
1984	85.6	81.4	82.3	82.7	83.4	84.1	84.8	85.1	86.4	87.4	88.7	89.9	90.7
1985	100.0	92.0	94.6	95.5	96.0	98.1	98.9	99.7	101.1	102.0	103.8	108.2	110.1
1986	119.6	112.4	114.2	114.2	115.3	117.3	117.7	119.4	121.6	122.5	125.2	127.1	128.1
1987	136.2	129.1	130.8	132.3	133.9	134.5	135.2	136.2	137.9	139.3	141.0	141.9	142.6
1988	154.1	144.3	146.7	148.2	150.5	152.4	153.6	154.8	156.5	157.9	159.5	162.0	163.3
1989	177.6	165.5	168.6	171.1	173.9	176.4	177.1	178.8	180.8	181.8	183.9	185.6	187.2
1990	198.9	188.9	190.3	190.8	194.1	196.6	197.2	197.3	199.-	202.2	205.5	212.7	212.0

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GOVERNMENT STATISTICS

HISTORICAL GOVERNMENT STATISTICS

UNITED STATES

PRODUCER PRICE INDEX — Industrial Commodities (1982=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	32.0	31.9	31.9	31.9	31.9	31.9	31.9	31.9	32.0	32.1	32.2	32.3	32.4
1968	32.8	32.5	32.7	32.7	32.8	32.8	32.8	32.8	32.8	32.9	33.1	33.1	33.2
1969	33.9	33.4	33.6	33.7	33.8	33.8	33.8	33.8	34.0	34.1	34.3	34.4	34.5
1970	35.2	34.7	34.8	34.8	35.0	35.1	35.2	35.3	35.3	35.4	35.6	35.6	35.8
1971	36.5	35.9	36.0	36.2	36.3	36.4	36.5	36.7	36.9	36.9	36.9	36.8	37.0
1972	37.8	37.1	37.3	37.4	37.5	37.7	37.8	37.8	37.9	38.0	38.0	38.1	38.2
1973	40.3	38.4	38.8	39.3	39.8	40.1	40.3	40.4	40.6	40.8	41.1	41.7	42.3
1974	49.2	43.3	44.2	45.6	46.9	48.2	49.2	50.5	51.7	52.1	52.8	53.1	53.2
1975	54.9	53.6	53.9	54.1	54.3	54.5	54.6	54.8	55.1	55.4	56.0	56.1	56.4
1976	58.4	56.8	57.0	57.3	57.7	57.8	58.1	58.5	58.9	59.2	59.7	59.9	60.0
1977	62.5	60.3	60.9	61.4	61.9	62.2	62.3	62.7	63.1	63.3	63.7	63.8	64.1
1978	67.0	64.6	65.0	65.4	66.0	66.4	66.8	67.3	67.7	68.0	68.7	69.2	69.6
1979	75.7	70.5	71.3	72.2	73.?	74.2	74.9	76.1	77.0	78.2	79.7	80.3	81.1
1980	88.0	83.4	85.1	86.0	86.9	87.1	87.6	88.4	89.1	89.3	90.3	90.7	91.8
1981	97.4	93.3	94.7	95.9	97.2	97.6	97.7	98.1	98.4	98.4	99.0	99.0	99.3
1982	100.0	99.8	99.8	99.6	99.2	99.1	99.5	100.2	100.3	100.1	100.6	100.9	100.9
1983	101.1	100.5	100.5	100.4	100.0	100.4	100.9	101.4	101.6	101.5	102.0	101.9	102.0
1984	103.3	102.2	102.7	103.1	103.3	103.5	103.7	103.7	103.5	103.2	103.6	103.7	103.4
1985	103.7	103.4	103.2	103.3	103.7	104.2	104.0	103.9	103.7	103.2	103.8	104.0	104.1
1986	100.0	103.7	102.1	100.5	99.8	99.8	99.8	98.8	98.6	98.8	99.1	99.2	99.2
1987	102.6	100.4	100.8	101.1	101.6	101.9	102.4	103.1	103.7	103.5	104.0	104.2	104.1
1988	106.3	104.3	104.6	104.7	105.6	106.1	106.5	106.7	107.1	106.8	107.1	107.4	108.1
1989	111.6	109.4	110.1	110.5	111.8	112.1	112.4	112.2	111.4	111.9	112.4	112.2	112.3
1990	115.8	114.1	113.6	113.2	113.2	113.5	113.2	113.4	115.9	118.4	121.4	120.7	119.0

PRODUCER PRICE INDEX — All Commodities (1982=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	33.4	33.4	33.4	33.3	33.1	33.3	33.5	33.5	33.4	33.4	33.4	33.4	33.7
1968	34.2	33.8	34.0	34.1	34.1	34.2	34.2	34.3	34.2	34.4	34.4	34.5	34.6
1969	35.6	34.8	35.0	35.2	35.3	35.5	35.7	35.8	35.7	35.8	35.9	36.1	36.3
1970	36.9	36.5	36.7	36.7	36.8	36.8	36.9	37.1	36.9	37.1	37.1	37.1	37.1
1971	38.1	37.3	37.7	37.8	37.9	38.1	38.2	38.3	38.5	38.3	38.3	38.3	38.6
1972	39.8	38.8	39.2	39.2	39.3	39.5	39.7	40.0	40.1	40.2	40.1	40.3	41.1
1973	45.0	41.6	42.4	43.4	43.6	44.5	45.5	44.9	47.5	46.7	46.3	46.5	47.4
1974	53.5	49.0	50.0	50.6	51.0	51.8	52.0	54.0	55.9	55.9	56.9	57.4	57.3
1975	58.4	57.4	57.2	56.9	57.5	57.9	58.0	58.7	59.0	59.4	59.8	59.5	59.7
1976	61.1	59.9	59.9	60.0	60.6	60.8	61.2	61.6	61.4	61.8	61.9	62.0	62.5
1977	64.9	62.8	63.5	64.1	64.9	65.2	65.0	65.1	65.0	65.3	65.6	65.8	66.2
1978	69.9	66.8	67.5	68.1	69.0	69.5	70.0	70.4	70.4	71.0	71.8	72.1	72.7
1979	78.7	73.8	74.9	75.8	76.9	77.5	78.0	79.2	79.6	80.9	82.1	82.6	83.4
1980	89.8	85.2	86.9	87.5	87.8	88.3	88.7	90.3	91.5	91.7	92.8	93.2	93.8
1981	98.0	95.2	96.1	97.0	98.0	98.3	98.5	99.0	99.0	98.8	98.9	98.8	98.8
1982	100.0	99.7	99.8	99.6	99.6	99.8	100.0	100.4	100.3	100.0	100.2	100.3	100.5
1983	101.3	100.2	100.5	100.4	100.4	100.8	101.1	101.3	101.8	102.0	102.2	102.1	102.3
1984	103.7	102.9	103.2	103.9	104.0	104.1	104.0	104.2	103.8	103.4	103.4	103.7	103.5
1985	103.2	103.4	103.3	103.1	103.3	103.5	103.3	103.2	102.7	102.1	102.9	103.4	103.6
1986	100.2	103.2	101.7	100.3	99.6	100.0	99.9	99.4	99.3	99.4	99.7	99.8	99.7
1987	102.8	100.5	101.0	101.2	101.9	102.6	103.0	103.5	103.8	103.7	104.1	104.2	104.1
1988	106.9	104.5	104.8	104.9	105.8	106.5	107.4	107.8	108.0	108.1	108.2	108.3	109.0
1989	112.2	110.5	110.8	111.5	112.3	113.2	112.9	112.8	112.0	112.4	112.8	112.7	113.0
1990	116.3	114.9	114.4	114.2	114.1	114.6	114.3	114.5	116.5	118.4	120.8	120.1	118.7

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UNITED STATES *(continued)*

CONSUMER PRICE INDEX (1982-1984=100)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	33.4	32.9	32.9	33.0	33.1	33.2	33.4	33.4	33.5	33.6	33.7	33.8	33.9
1968	34.8	34.1	34.2	34.3	34.4	34.5	34.7	34.9	35.0	35.1	35.3	35.4	35.5
1969	36.7	35.6	35.8	36.1	36.3	36.4	36.6	36.8	37.0	37.1	37.3	37.5	37.7
1970	38.8	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8
1971	40.5	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.8	40.8	40.9	40.9	41.1
1972	41.8	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5
1973	44.4	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2
1974	49.3	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9
1975	53.8	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5
1976	56.9	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2
1977	60.6	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1
1978	65.2	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7
1979	72.6	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7
1980	82.4	77.9	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3
1981	90.9	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0
1982	96.5	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6
1983	99.6	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3
1984	103.9	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3
1985	107.6	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3
1986	109.6	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5
1987	113.6	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4
1988	118.3	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5
1989	124.0	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1
1990	130.7	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8

GROSS AVERAGE HOURLY EARNINGS of Production or Non-supervisory Workers (US$)–Metal Mining (SIC 10)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	3.24	3.20	3.20	3.23	3.24	3.23	3.25	3.24	3.24	3.29	3.28	3.28	3.29
1968	3.42	3.31	3.32	3.31	3.37	3.37	3.40	3.41	3.47	3.51	3.48	3.51	3.51
1969	3.64	3.51	3.53	3.54	3.60	3.62	3.64	3.65	3.69	3.72	3.73	3.73	3.74
1970	3.88	3.75	3.77	3.77	3.83	3.85	3.88	3.91	3.91	4.01	3.96	3.99	3.96
1971	4.12	3.95	3.93	3.96	4.03	4.03	4.03	3.99	4.30	4.38	4.30	4.28	4.35
1972	4.56	4.46	4.44	4.46	4.49	4.47	4.48	4.59	4.64	4.69	4.65	4.65	4.68
1973	4.84	4.68	4.71	4.71	4.77	4.74	4.75	4.80	4.85	4.98	4.97	5.00	5.02
1974	5.44	5.10	5.12	5.15	5.29	5.29	5.31	5.36	5.53	5.68	5.75	5.80	5.86
1975	6.13	5.90	5.90	5.89	5.93	6.00	6.02	6.11	6.23	6.35	6.38	6.40	6.44
1976	6.76	6.53	6.51	6.55	6.64	6.63	6.67	6.76	6.89	7.00	6.93	6.99	7.00
1977	7.28	6.95	7.02	7.07	7.12	7.19	7.26	7.32	7.37	7.49	7.52	7.63	7.65
1978	8.23	7.73	7.79	7.84	7.97	8.04	8.08	8.25	8.40	8.56	8.60	8.71	8.72
1979	9.27	8.71	8.81	8.85	9.03	9.06	9.09	9.33	9.39	9.63	9.67	9.79	9.81
1980	10.26	9.92	9.93	9.91	10.01	10.19	10.13	10.24	10.38	10.54	10.58	10.72	10.83
1981	11.55	10.90	11.13	11.11	11.28	11.24	11.29	11.60	11.84	12.10	12.08	12.12	12.07
1982	12.31	12.17	12.22	12.28	12.19	12.21	12.29	12.27	12.31	12.58	12.51	12.55	12.53
1983	12.58	12.56	12.61	12.39	12.51	12.44	12.55	12.59	12.54	12.62	12.68	12.64	12.78
1984	13.05	12.68	12.83	12.89	12.94	13.01	12.99	13.07	13.15	13.24	13.27	13.28	13.32
1985	13.38	13.29	13.31	13.29	13.43	13.24	13.21	13.44	13.55	13.44	13.49	13.49	13.45
1986	12.46	12.22	12.30	12.33	12.42	12.43	12.50	12.50	12.53	12.54	12.53	12.61	12.67
1987	12.52	12.72	12.63	12.58	12.51	12.50	12.52	12.41	12.40	12.50	12.42	12.54	12.60
1988	13.24	13.01	13.14	13.16	13.14	13.04	13.23	13.29	13.34	13.28	13.34	13.33	13.56
1989	13.59	13.72	13.58	13.63	13.60	13.51	13.54	13.61	13.56	13.63	13.69	13.62	13.45
1990	14.10	13.69	13.70	13.80	13.92	13.96	14.00	14.29	14.27	14.41	14.43	14.34	14.39

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NUEXCO

GOVERNMENT STATISTICS

UNITED STATES *(continued)*

GROSS AVERAGE HOURLY EARNINGS of Production or Non-supervisory Workers –Primary Non-ferrous Metals (SIC 333)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	3.26	3.18	3.19	3.19	3.20	3.20	3.25	3.27	3.31	3.34	3.34	3.35	3.36
1968	3.48	3.38	3.36	3.38	3.48	3.36	3.45	3.47	3.52	3.53	3.53	3.56	3.58
1969	3.68	3.59	3.58	3.58	3.62	3.64	3.71	3.73	3.73	3.75	3.74	3.75	3.76
1970	3.87	3.78	3.77	3.76	3.80	3.83	3.88	3.94	3.92	3.98	3.90	3.92	3.95
1971	4.15	3.95	3.95	3.95	3.96	3.98	4.15	4.32	4.35	4.34	4.28	4.29	4.40
1972	4.59	4.47	4.45	4.46	4.47	4.47	4.57	4.63	4.65	4.69	4.68	4.73	4.77
1973	4.98	4.79	4.79	4.83	4.82	4.85	4.96	5.03	5.04	5.10	5.12	5.15	5.22
1974	5.63	5.21	5.31	5.43	5.50	5.49	5.59	5.68	5.76	5.83	5.86	5.87	5.93
1975	6.24	5.97	5.96	6.04	6.04	6.07	6.25	6.34	6.40	6.49	6.53	6.52	6.44
1976	6.87	6.54	6.52	6.64	6.74	6.71	6.82	6.91	6.96	7.07	7.10	7.18	7.18
1977	7.67	7.16	7.20	7.24	7.34	7.37	7.71	7.83	7.78	8.01	8.07	8.12	8.15
1978	8.56	8.24	8.28	8.27	8.32	8.36	8.56	8.62	8.66	8.74	8.83	8.86	8.97
1979	9.50	9.00	9.01	9.11	9.49	9.13	9.44	9.57	9.70	9.79	9.87	9.86	9.92
1980	10.63	10.06	10.02	10.24	10.31	10.[illegible]	10.70	10.84	10.80	10.95	11.01	11.08	11.33
1981	11.98	11.32	11.36	11.51	11.64	11.70	11.90	12.22	12.12	12.72	12.45	12.51	12.48
1982	12.93	12.69	12.64	12.73	12.72	12.74	12.94	12.94	13.00	13.50	13.25	13.21	13.04
1983	13.43	13.32	13.28	13.33	13.33	13.60	13.37	13.55	13.46	13.45	13.54	13.55	13.32
1984	13.43	13.37	13.33	13.32	13.29	13.36	13.39	13.35	13.51	13.39	13.54	13.76	13.66
1985	13.74	13.71	13.74	13.98	13.63	13.60	13.67	13.83	13.70	13.67	13.65	13.95	13.79
1986	13.48	13.68	13.80	13 91	13.89	13.79	13.50	13.29	13.11	13.25	13.14	13.13	13.01
1987	12.98	12.96	12.80	12.76	12.84	12.87	12.88	13.02	13.01	13.29	12.99	13.11	13.14
1988	13.26	13.02	12.96	13.20	13.20	13.14	13.18	13.31	13.31	13.40	13.43	13.43	13.48
1989	13.72	13.49	13.47	13.51	13.63	13.54	13.59	13.68	13.67	13.93	13.91	14.08	14.14
1990	14.36	13.95	13.99	14.04	14.30	14.16	14.31	14.49	14.60	14.48	14.58	14.73	14.69

GROSS AVERAGE HOURLY EARNINGS of Production or Non-supervisory Workers–Chemicals & Allied Products (SIC 28)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep[illegible]	Oct	Nov	Dec
1967	3.10	3.04	3.05	3.05	3.06	3.07	3.10	3.13	3.12	3.14	3.15	3.16	3.17
1968	3.26	3.20	3.19	3.19	3.22	3.23	3.26	3.28	3.29	3.31	3.31	3.33	3.36
1969	3.47	3.37	3.37	3.38	3.41	3.43	3.46	3.49	3.50	3.52	3.55	3.57	3.58
1970	3.69	3.60	3.60	3.60	3.62	3.64	3.68	3.71	3.73	3.78	3.77	3.79	3.81
1971	3.97	3.84	3.85	3.85	3.90	3.92	3.96	4.02	4.02	4.06	4.04	4.04	4.11
1972	4.26	4.15	4.17	4.17	4.18	4.22	4.25	4.28	4.29	4.35	4.34	4.34	4.38
1973	4.51	4.41	4.40	4.40	4.44	4.46	4.49	4.53	4.54	4.57	4.59	4.62	4.64
1974	4.88	4.67	4.68	4.69	4.75	4.76	4.82	4.91	4.94	5.01	5.04	5.10	5.15
1975	5.39	5.17	5.18	5.21	5.24	5.31	5.37	5.43	5.46	5.51	5.53	5.59	5.63
1976	5.91	5.68	5.71	5.72	5.80	5.82	5.87	5.95	5.96	6.05	6.07	6.11	6.16
1977	6.43	6.19	6.20	6.23	6.30	6.33	6.39	6.47	6.49	6.57	6.62	6.66	6.73
1978	7.02	6.78	6.82	6.84	6.87	6.94	6.97	7.05	7.06	7.14	7.20	7.23	7.29
1979	7.60	7.33	7.33	7.37	7.52	7.48	7.54	7.61	7.66	7.74	7.83	7.89	7.93
1980	8.31	7.98	8.01	8.06	8.13	8.18	8.25	8.37	8.40	8.47	8.53	8.60	8.69
1981	9.12	8.75	8.80	8.85	8.95	8.99	9.06	9.16	9.18	9.37	9.36	9.41	9.51
1982	9.96	9.67	9.67	9.70	9.79	9.81	9.94	10.01	10.01	10.19	10.23	10.26	10.32
1983	10.58	10.34	10.42	10.40	10.44	10.50	10.51	10.58	10.61	10.69	10.77	10.84	10.87
1984	11.07	10.88	10.87	10.91	10.94	10.99	11.00	11.09	11.09	11.19	11.28	11.31	11.33
1985	11.57	11.38	11.38	11.36	11.47	11.45	11.51	11.59	11.61	11.66	11.71	11.81	11.86
1986	11.98	11.87	11.83	11.80	11.84	11.90	11.95	12.05	11.99	12.03	12.08	12.17	12.20
1987	12.37	12.17	12.21	12.24	12.30	12.32	12.28	12.37	12.33	12.56	12.50	12.55	12.61
1988	12.71	12.59	12.58	12.57	12.61	12.62	12.64	12.75	12.67	12.80	12.83	12.90	12.95
1989	13.09	12.90	12.92	12.95	12.95	13.01	13.00	13.15	13.10	13.20	13.27	13.28	13.32
1990	13.54	13.34	13.27	13.34	13.53	13.46	13.51	13.58	13.57	13.62	13.72	13.73	13.75

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UNITED STATES *(continued)*

GROSS AVERAGE HOURLY EARNINGS of Production or Non-supervisory Workers
Electronic & Electronic Equipment (SIC 36)

Year	Average	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1967	2.77	2.70	2.72	2.73	2.74	2.76	2.78	2.79	2.78	2.78	2.81	2.83	2.86
1968	2.93	2.87	2.87	2.88	2.87	2.90	2.91	2.92	2.92	2.95	2.98	3.00	3.00
1969	3.09	3.04	3.04	3.04	3.06	3.07	3.08	3.09	3.10	3.13	3.13	3.12	3.16
1970	3.28	3.17	3.20	3.23	3.24	3.26	3.29	3.31	3.30	3.32	3.31	3.33	3.41
1971	3.49	3.42	3.42	3.45	3.45	3.48	3.48	3.50	3.50	3.52	3.52	3.53	3.61
1972	3.71	3.62	3.64	3.65	3.66	3.68	3.69	3.70	3.72	3.76	3.76	3.78	3.83
1973	3.91	3.83	3.82	3.82	3.85	3.86	3.88	3.92	3.95	3.98	3.99	3.99	4.06
1974	4.21	4.05	4.04	4.06	4.06	4.13	4.20	4.22	4.22	4.32	4.37	4.40	4.49
1975	4.64	4.49	4.50	4.54	4.56	4.59	4.64	4.66	4.67	4.73	4.73	4.76	4.83
1976	4.96	4.81	4.81	4.84	4.80	4.86	4.87	4.95	5.00	5.07	5.11	5.13	5.20
1977	5.39	5.23	5.22	5.24	5.26	5.29	5.34	5.39	5.44	5.50	5.51	5.55	5.64
1978	5.82	5.65	5.67	5.67	5.69	5.72	5.74	5.83	5.86	5.94	5.95	5.98	6.10
1979	6.31	6.12	6.14	6.17	6.12	6.22	6.26	6.28	6.36	6.46	6.48	6.51	6.63
1980	6.94	6.66	6.70	6.76	6.78	6.76	6.85	6.94	6.99	7.11	7.16	7.25	7.35
1981	7.62	7.37	7.40	7.44	7.47	7.51	7.57	7.65	7.74	7.76	7.82	7.84	7.92
1982	8.21	8.00	7.98	8.04	8.06	8.09	8.14	8.22	8.29	8.36	8.40	8.43	8.50
1983	8.66	8.52	8.55	8.58	8.58	8.59	8.63	8.70	8.64	8.76	8.74	8.80	8.80
1984	9.04	8.91	8.91	8.94	8.94	8.94	8.96	9.00	9.05	9.13	9.14	9.20	9.32
1985	9.46	9.33	9.32	9.38	9.40	9.39	9.46	9.47	9.49	9.54	9.54	9.59	9.67
1986	9.65	9.58	9.57	9.60	9.60	9.63	9.59	9.66	9.64	9.69	9.66	9.72	9.81
1987	9.88	9.82	9.82	9.82	9.81	9.81	9.83	9.86	9.98	9.94	9.92	9.98	10.03
1988	9.79	9.66	9.66	9.67	9.74	9.76	9.79	9.77	9.81	9.87	9.85	9.93	9.99
1989	10.05	9.99	9.97	9.99	9.99	10.00	10.05	10.08	10.06	10.13	10.08	10.11	10.14
1990	10.32	10.13	10.16	10.17	10.17	10.22	10.27	10.34	10.33	10.42	10.47	10.53	10.57

GROSS NATIONAL PRODUCT IMPLICIT PRICE DEFLATOR (1982=100) — for the quarter ending

Year	Average	Year	Average	Year	Average	Year	Average
1967	35.9	1973	49.5	1979	78.6	1985	110.9
1968	37.7	1974	54.0	1980	85.7	1986	113.9
1969	39.8	1975	59.3	1981	94.0	1987	117.7
1970	42.0	1976	63.1	1982	100.0	1988	121.3
1971	44.4	1977	67.3	1983	103.9	1989	126.3
1972	46.5	1978	72.2	1984	107.7	1990	131.5

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NUCLEAR INDUSTRY CALENDAR

1991

Oct. 24 ***Canadian Participation in World Fusion: Opportunities and Challenges*** (Skyline Hotel, Ottawa, Canada).
Sponsored by the Canadian Nuclear Association and the Canadian Nuclear Society.
Contact: Sylvie Caron, CNA; 416-977-6152; Fax: 416-979-8356;
or mail: 144 Front St., Suite 725, Toronto, Ontario, Canada M5J 2L7.

Oct. 29-31 ***Uranium Hexafluoride Handling*** (William G. Pollard Auditorium, Oak Ridge, Tennessee).
Sponsored by Martin Marietta Energy Systems, Inc.
Contact: Diane Duck, MMES; 615-576-1676; or Fax: 615-576-1561.

Nov. 10-13 ***Nuclear Energy Forum*** (Westin St. Francis Hotel, San Francisco, California).
Sponsored by the U.S. Council for Energy Awareness.
Contact: USCEA Conference Office; 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

Nov. 10-15 ***American Nuclear Society Winter Meeting*** (Hilton Hotel, San Francisco, California).
Contact: ANS Meetings Department; 708-352-6611.

Nov. 13-14 ***Nuclear Power—A Fresh Start*** (Marriott Hotel, London, United Kingdom).
Sponsored by the Government of the United Kingdom.
Contact: Amanda Wright, IBC Technical Services; IBC Hse., Canada Rd., Byfleet, Surrey KT14 7JL, UK;
Phone: 071-236-4080; Fax: 071-489-0849.

Nov. 14-15 ***World Electricity Conference*** (Hotel Inter-Continental, London, United Kingdom).
Sponsored by the Financial Times and Power In Europe.
Contact: FT Conference Organization; 126 Jermyn Street, London SW1Y 4UJ, UK;
Phone: 071-925-2323; Fax: 071-925-2125; Telex: 27347 FTCONF G.

Dec. 2-4 ***PLEX '91 BERLIN – Nuclear Plant Life Extension, Upgrading, Repair, Refurbishment, Uprating and Ageing*** (Hotel Steigenberger, Berlin, Germany). Sponsored by Nuclear Engineering International.
Contact: Conference (PLEX); Status Meetings Ltd., Festival Hall, Petersfield, Hampshire, GU31 4JW, UK;
Phone: 44-730-66544; Fax: 44-730-68865; Telex: 86105 CONFER G.

1992

Feb. 23-25 ***INFO Centers Workshop*** (Marriott Hotel, Palm Beach Gardens, Florida).
Sponsored by the U.S. Council for Energy Awareness.
Contact: USCEA Conference Office; 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

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1992
(continued)

March 22-25 ***Fuel Cycle Conference '92*** (OMNI Charleston Hotel, Charleston, South Carolina).
Sponsored by the U. S. Council for Energy Awareness.
Contact: USCEA Conference Office: 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

April 12-16 ***8th Pacific Basin Conference*** (Taipei, Taiwan).
Sponsored by the Amercian Nuclear Society.
Contact: ANS Meetings Department; 708-352-6611.

April 26-28 ***INFO '92 Conference*** (OMNI Charlotte Hotel, Charlotte, North Carolina).
Sponsored by the U. S. Council for Energy Awareness.
Contact: USCEA Conference Office: 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

May 5-7 ***Annual Meeting on Nuclear Technology '92*** (City Conference Hall, Karlsruhe, Germany).
Sponsored by the German Nuclear Society and the German Atomic Forum.
Contact: Congress Office JK'92; INFORUM GmbH, Heussallee 10, W-5300 Bonn 1; Phone: 0228-507-223.

Sept. 20-23 ***International Uranium Seminar '92*** (Hyatt Regency Hotel, Lake Tahoe, Nevada).
Sponsored by the U. S. Council for Energy Awareness.
Contact: USCEA Conference Office: 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

Sept. 21-23 ***Second International Conference on Training for Operation & Maintenance in the Nuclear Industry***
(The Moat House International Hotel, Stratford-upon-Avon, United Kingdom).
Sponsored by the Institution of Nuclear Engineers.
Contact: INE Conference Secretary; 081-698-1500 or 081-698-4750; Fax: 018-695-6409.

Nov. 15-18 ***Nuclear Energy Forum*** (Fairmont Hotel, Chicago, Illinois).
Sponsored by the U. S. Council for Energy Awareness.
Contact: USCEA Conference Office: 202-293-0770; Telex: 7108249602; Fax: 202-785-4113.

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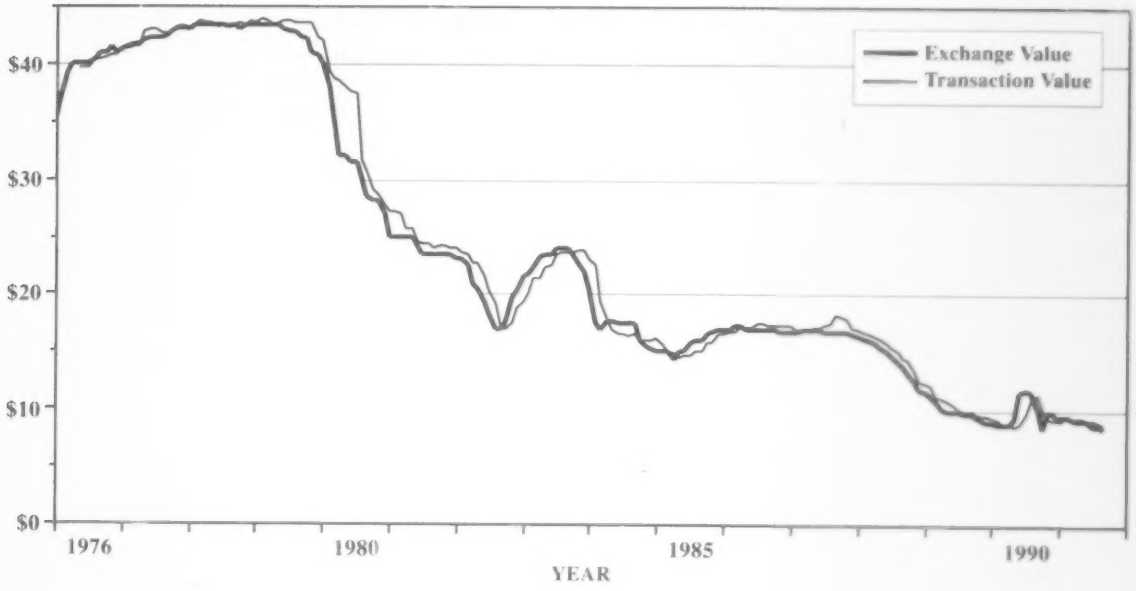
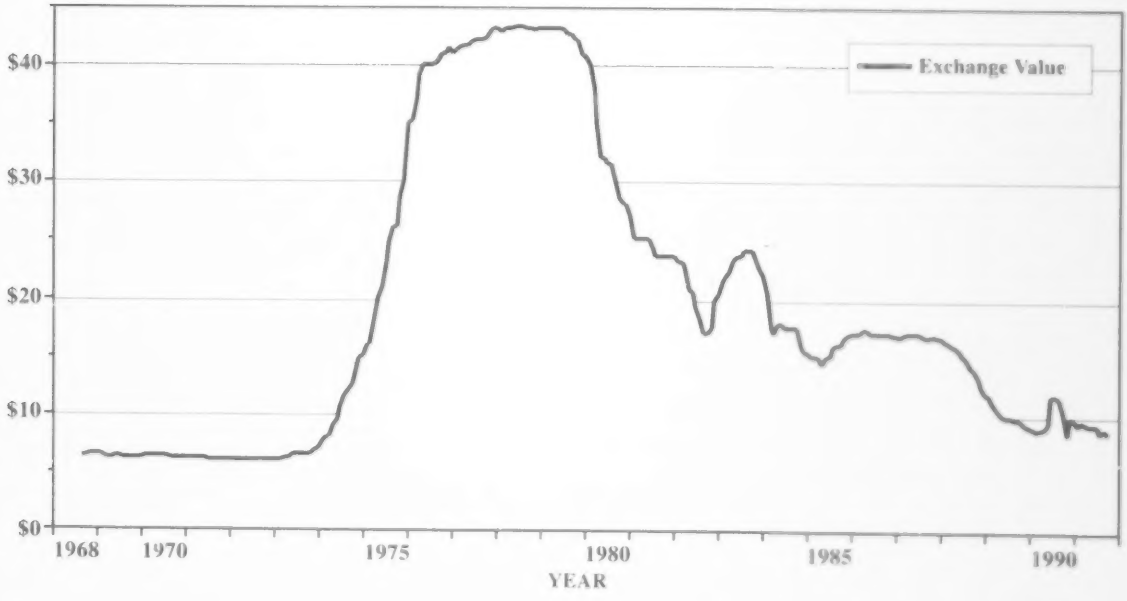
HISTORICAL MARKET DATA

NUEXCO HISTORICAL EXCHANGE VALUE AND TRANSACTION VALUE

(in US dollars per pound U_3O_8)





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HISTORICAL MARKET VALUES

Exchange Values

Determined as of the last day of the month indicated ($US/lb U_3O_8)

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1968	—	—	—	—	—	—	—	6.35	6.35	6.40	6.45	6.50
1969	—	6.35	6.10	6.10	6.25	6.25	6.20	6.20	6.15	6.15	6.15	6.20
1970	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.20	6.15	6.15	6.15	6.15
1971	6.20	6.20	6.20	6.20	6.15	6.05	6.00	5.95	5.95	5.95	5.95	5.95
1972	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95
1973	5.95	6.00	6.10	6.20	6.45	6.50	6.50	6.50	6.50	6.50	6.75	7.00
1974	7.70	7.90	8.00	9.00	9.50	10.50	11.50	12.00	12.50	14.00	14.75	15.00
1975	16.00	16.00	18.00	20.00	21.00	23.00	24.70	26.00	26.00	28.50	30.00	35.00
1976	35.20	37.00	39.25	40.00	40.00	40.00	40.00	40.40	41.00	41.00	41.50	41.00
1977	41.35	41.50	41.60	41.60	42.00	42.25	42.25	42.25	42.40	42.75	43.20	43.20
1978	42.90	43.25	43.25	43.25	43.40	43.40	43.40	43.10	43.25	43.00	43.25	43.25
1979	43.25	43.25	43.25	43.25	43.25	43.00	42.70	42.70	42.20	42.20	41.00	40.75
1980	40.00	38.00	35.00	32.00	32.00	31.50	31.50	30.00	28.50	28.00	28.00	27.00
1981	25.00	25.00	25.00	25.00	25.00	24.25	23.50	23.50	23.50	23.50	23.50	23.50
1982	23.00	23.00	22.50	20.75	20.50	19.25	18.25	17.00	17.00	17.50	19.75	20.25
1983	21.50	21.75	22.25	23.25	23.50	23.50	24.00	24.00	24.00	23.50	22.50	22.00
1984	20.50	17.50	17.00	17.75	17.75	17.50	17.50	17.50	17.50	16.00	15.50	15.25
1985	15.00	15.00	15.00	14.25	15.00	15.00	15.75	16.00	16.00	16.50	16.75	17.00
1986	17.00	17.00	17.25	17.25	17.00	17.00	17.00	17.00	17.00	17.00	16.75	16.75
1987	16.65	16.75	17.00	17.00	17.00	16.90	16.75	16.65	16.65	16.75	16.65	16.55
1988	16.30	16.15	15.90	15.75	15.40	15.10	14.75	14.15	13.75	13.15	12.50	11.75
1989	11.60	11.20	10.70	10.10	9.85	9.80	9.80	9.70	9.60	9.40	9.20	9.00
1990	8.85	8.70	8.80	8.80	9.25	11.60	11.70	11.45	10.10	8.35	9.80	9.70
1991	9.10	9.50	9.30	9.10	9.20	9.05	8.55	8.75	**8.40**			

US Premium (Relative to the Exchange Value)

Determined as of the last day of the month indicated ($US/lb U_3O_8)

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1986	—	—	—	—	—	—	—	—	—	—	0.65	0.75
1987	0.85	1.00	1.50	1.50	0.90	0.60	2.50	2.35	2.10	1.65	0.85	0.65
1988	0.70	0.50	0.15	0.25	0.60	0.00	0.00	0.00	0.00	0.00	**Discontinued**	

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UF_6 Values

Determined as of the last day of the month indicated ($US/kg U as UF_6)

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1985	—	—	—	40.50	42.50	42.50	44.00	44.50	44.50	46.00	46.00	47.00
1986	47.00	48.00	48.00	48.50	48.25	48.25	48.25	48.00	48.00	48.00	48.00	47.75
1987	47.75	48.00	48.00	48.00	47.75	47.75	47.50	47.00	46.75	47.00	47.00	47.00
1988	46.50	46.00	45.50	45.25	44.75	44.00	42.75	41.00	40.75	39.00	37.50	35.50
1989	34.75	34.00	33.00	30.50	30.25	30.25	30.00	29.75	29.75	28.25	27.75	26.50
1990	25.90	25.25	24.40	24.40	25.50	32.00	32.50	32.25	29.50	24.75	28.75	28.75
1991	27.50	27.75	27.50	27.25	27.60	27.25	25.75	26.25	**25.50**			

US Premium (Relative to the UF_6 Value)

Determined as of the last day of the month indicated ($US/kg U as UF_6)

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1986	—	—	—	—	—	—	—	—	—	—	2.50	2.50
1987	2.50	2.50	3.50	3.00	2.25	1.75	6.50	6.00	4.25	3.10	2.25	2.00
1988	1.25	1.25	0.50	0.50	1.00	0.00	0.00	0.00	0.00	0.00	**Discontinued**	

Conversion Values

Determined as of the last day of the month indicated ($US/lb U as UF_6)

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1981	1.20	1.20	1.20	1.40	1.15	1.15	1.15	1.10	1.10	1.10	1.20	1.20
1982	1.20	1.20	1.20	1.20	1.00	1.00	1.00	0.90	1.10	1.60	1.45	1.45
1983	1.20	1.40	1.40	1.20	1.20	1.20	1.10	1.10	1.00	0.60	0.60	0.60
1984	0.60	0.30	0.80	0.80	0.80	0.00	0.00	0.80	1.00	1.00	0.80	0.80
1985	1.00	1.00	1.00	1.50	1.50	1.60	1.60	1.60	1.60	1.60	1.60	1.60
1986	1.60	1.80	1.90	1.80	1.80	1.80	1.80	1.90	1.90	1.90	1.80	1.80
1987	1.80	1.80	1.80	1.80	1.80	1.80	1.90	1.90	1.90	1.90	1.90	1.90
1988	1.90	1.80	1.80	1.80	1.80	1.80	1.85	1.95	1.95	1.95	1.95	1.95
1989	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.90	1.90	1.80	1.75	1.65
1990	1.50	1.50	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
1991	1.45	1.45	1.45	1.45	1.50	1.50	1.50	1.60	**1.55**			

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Transaction Values

Year	Determined as of the last day of the month indicated ($US/lb U3O8)											
	Jan	**Feb**	**March**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1976	—	—	—	—	39.60	39.70	39.70	40.40	40.30	40.60	40.70	40.70
1977	41.30	41.30	41.40	41.50	42.80	42.90	43.00	42.60	42.50	42.80	42.90	42.90
1978	43.10	43.30	43.70	43.60	43.60	43.20	43.30	43.40	43.40	43.60	43.40	43.70
1979	43.60	43.80	43.70	43.40	43.60	43.70	43.70	43.60	43.60	43.60	43.50	42.40
1980	42.00	39.30	38.60	38.40	37.90	37.60	37.30	31.60	30.60	29.00	28.70	27.70
1981	27.20	27.20	27.00	25.70	25.70	24.50	24.40	24.30	23.90	24.10	24.10	24.00
1982	24.00	23.70	23.40	22.60	22.70	21.50	20.30	19.10	17.30	17.00	17.55	18.80
1983	19.35	20.00	21.35	21.40	22.35	22.45	23.50	23.60	23.65	23.65	23.85	23.85
1984	23.05	22.50	19.25	17.90	17.00	16.50	16.60	16.40	16.55	16.05	15.90	15.90
1985	16.20	15.70	15.05	14.90	14.45	14.60	14.75	15.10	15.10	15.75	15.80	16.55
1986	16.55	16.70	16.70	17.10	17.15	17.20	17.50	17.45	17.35	17.25	17.30	17.35
1987	17.35	16.90	16.95	17.00	17.20	17.10	17.30	17.55	18.20	18.05	17.80	17.20
1988	16.85	16.65	16.55	16.45	16.10	15.80	15.45	15.00	14.50	14.40	13.30	12.50
1989	12.25	12.00	11.25	11.00	10.75	10.45	9.95	9.80	9.80	9.65	9.55	9.40
1990	9.25	9.05	8.75	8.65	8.55	8.80	9.75	10.80	11.40	10.10	9.30	9.15
1991	9.40	9.45	9.35	9.30	9.30	9.20	9.15	8.95	**8.70**			

SWU Values

Year	Determined as of the last day of the month indicated ($US per SWU)											
	Jan	**Feb**	**March**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1986	80	80	80	80	75	78	78	78	78	78	80	80
1987	80	80	77	77	75	73	75	75	73	69	73	73
1988	73	73	70	68	68	68	68	65	65	65	65	65
1989	65	67	67	67	66	66	66	65	63	59	57	54
1990	54	50	50	50	50	50	50	50	50	51	51	51
1991	51	50	52	52	54	59	66	67	**67**			

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HISTORICAL MARKET DATA

Loan Rates

Year	Determined as of the last day of the month indicated (Percent per Annum)											
	Jan	**Feb**	**March**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1968	—	—	—	—	—	—	—	4.00	4.00	4.00	4.00	4.00
1969	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00
1970	6.00	6.20	6.40	6.50	6.50	6.50	6.50	5.00	6.50	6.00	5.50	5.50
1971	5.00	4.75	4.75	4.75	5.00	5.25	5.25	5.25	5.25	5.25	4.50	4.50
1972	4.00	4.00	4.00	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00
1973	5.50	5.50	5.75	5.75	6.00	6.25	7.00	7.00	7.00	7.00	7.50	8.00
1974	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
1975	8.00	7.00	7.00	7.00	7.00	6.50	6.50	6.50	6.50	6.50	6.50	6.50
1976	6.50	6.50	6.50	6.50	*	*	*	*	*	*	*	*
1977	*	*	*	*	6.50	6.50	6.50	6.75	7.25	7.25	7.25	7.25
1978	7.25	7.00	7.00	7.00	7.00	7.50	7.75	7.75	7.75	7.00	7.00	7.00
1979	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
1980	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
1981	7.00	7.00	7.00	7.00	7.00	5.50	5.50	5.50	5.50	6.00	6.00	6.00
1982	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1983	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1984	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1985	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1986	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1987	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	3.50	3.50
1988	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1989	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1990	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1991	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	**3.50**			

* Float with Prime Rate

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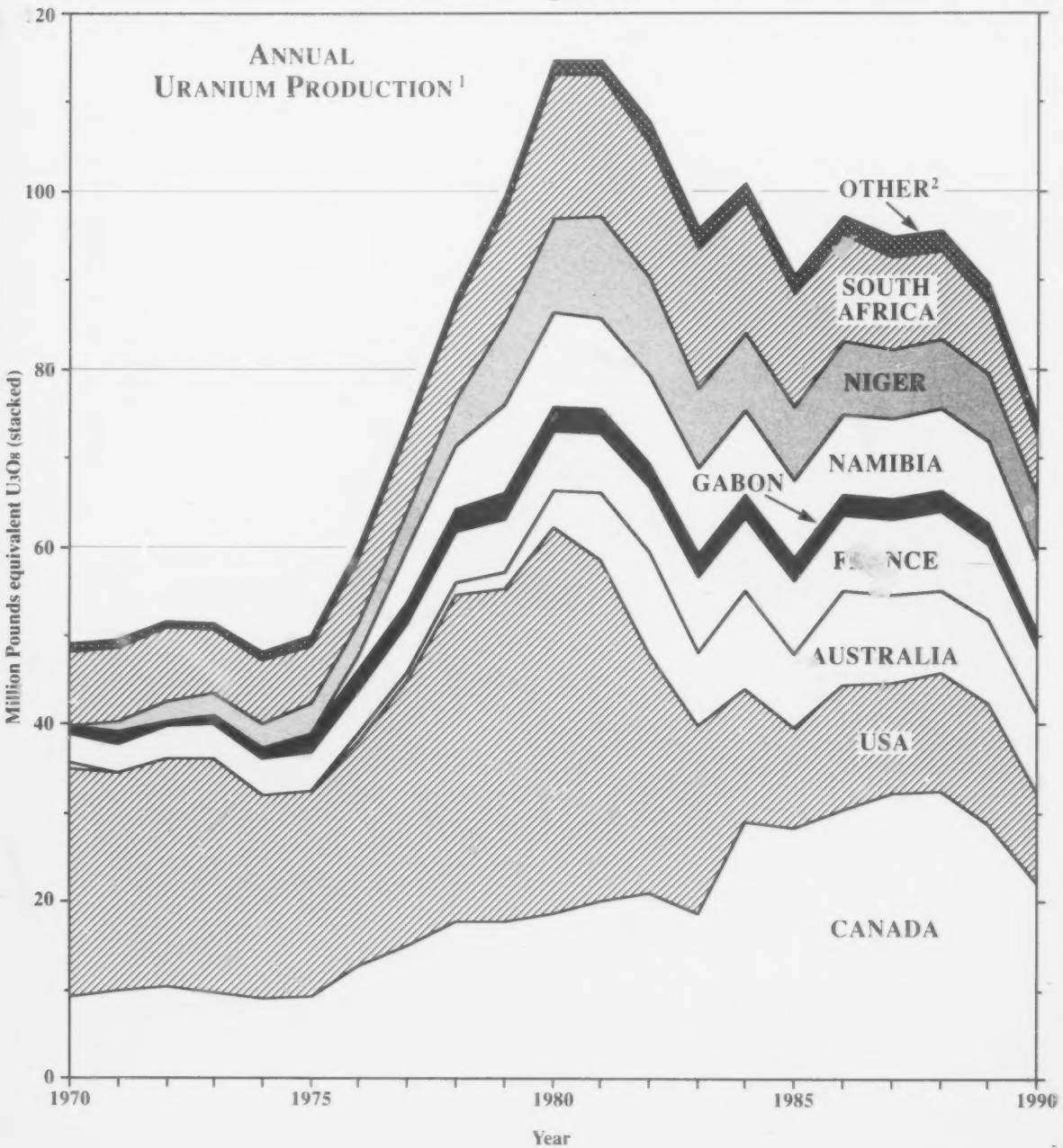

[1] Estimated world uranium production in 1990 totalled 85.2 million pounds equivalent U_3O_8 —
(Australia: 9.1 – Canada: 22.0 – France: 7.4 – Gabon: 1.8 – Namibia: 8.0 – Niger: 7.4 – South Africa: 6.4 – USA: 10.2 – Other[2]: 2.2)

[2] Other includes: Argentina, Belgium, Brazil, India, Pakistan, Portugal, Spain, western Germany, and Yugoslavia

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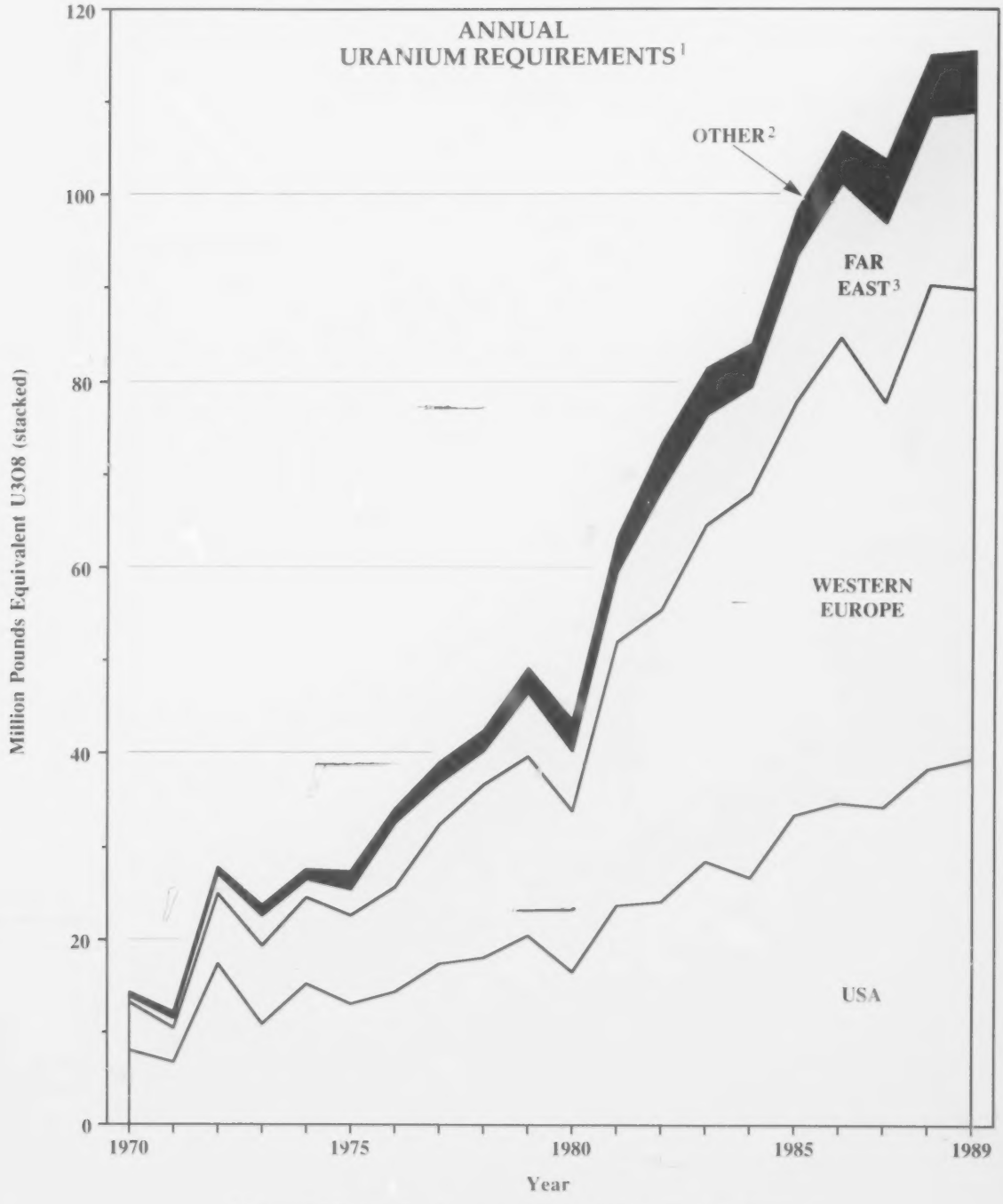
HISTORICAL MARKET DATA



[1] Calculated by NUEXCO based on actual completion dates and operating performance, and NUEXCO's estimate of enriching tails assays.

[2] **Other** include: Argentina, Brazil, Canada, India, Mexico, Pakistan and South Africa.

[3] Does not include Peoples Republic of China.

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Australia

Year	Period [1]	Consumer Price Index [2] (1980/1981 = 100)	Price Index of Materials Used in Manufacturing Industry — All Groups [3] (1984/1985 = 100)	Average Weekly Ordinary Time Earnings — Adult Males — Australia [4] (Australian dollars)	Award Rates of Pay Indexes Australia - Adult Males In Mining Wage Earners, Weekly Rates [5] (June 1985=100)
1980	Avg.	95.8	83.1	—	69.6R
1981	Avg.	105.0	85.9	—	76.1R
1982	Avg.	116.7	89.0	—	86.4R
1983	Avg.	128.5	96.9	—	89.9R
1984	Avg.	133.6	98.0	—	96.0R
1985	Avg.	142.6	107.3	—	100.1R
1986	Avg.	155.5	101.5	—	104.9R
1987	Avg.	168.7	108.9	465.88	112.9R
1988	Avg.	180.9	111.8	496.90	115.4R
1989	Avg.	194.6	117.0	534.65	126.0
1990	Avg.	208.7	123.4	571.43	129.6
Jan	1990	—	119.2	—	128.3
Feb	1990	—	120.8	555.80	128.3
Mar	1990	204.1	121.5	—	128.7
Apr	1990	—	119.9	—	129.0
May	1990	—	118.9	566.60	129.2
June	1990	207.4	116.6	—	129.8
July	1990	—	116.4	—	129.9
Aug	1990	—	122.4	574.10	130.0
Sept	1990	208.9	128.2	—	130.2
Oct	1990	—	134.1	—	130.4
Nov	1990	—	133.7	589.20	130.4
Dec	1990	214.5	128.8	—	130.6
Jan	1991	—	125.6	—	130.6
Feb	1991	—	121.5	597.70	130.6R
Mar	1991	214.1	119.1	—	130.8R
Apr	1991	—	117.6	—	131.0R
May	1991	—	117.8	592.00	131.0R
June	1991	214.4	120.4	—	131.0R
July	1991	—	120.4	—	130.9

P = Preliminary **R** = Revised since last month

[1] Monthly data for the period 1967 to 1990 appears in Report 278.
[2] Weighted average of six State capital cities (1975 to 1980), and eight capital cities from 1981 (Base: Financial year July 1980 to June 1981 = 100.0). Figures shown at end of quarter represent quarterly average.
[3] Australian Bureau of Statistics, Canberra: "Price Index of Materials Used in Manufacturing Industry" (Catalogue No. 6411.0).
[4] Australian Bureau of Statistics, Canberra: "Award Rates of Pay Indexes, Australia" (Catalogue No. 6312.0). Figures for the latest fourteen months shown are subject to revision.
[5] Australian Bureau of Statistics, Canberra: "Average Weekly Earnings, States & Australia" (Catalogue No. 6302.0).

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GOVERNMENT STATISTICS

Canada

		Industrial Products Price Index: All Commodities [1] (1986 = 100) [2]	Consumer Price Index: All Items (1986 = 100) [3]	Wage-earner Data: Average Hourly Earnings (C$) [4]				
				Uranium Mines (SIC 057)	Metal Mines (SIC 051-059)	Mines, Quarries and Oil Wells (SIC 051-099)	Metal Rolling, Casting and Extruding (SIC 298)	Chemicals and Chemical Products Industries (SIC 372-379)
1980	Avg.	75.9R	67.2R	–.–	–.–	–.–	–.–	–.–
1981	Avg.	83.6R	75.5	–.–	–.–	–.–	–.–	–.–
1982	Avg.	89.0	83.7	–.–	–.–	–.–	–.–	–.–
1983	Avg.	92.1	88.5	17.22	14.86	14.18	10.67	11.09R
1984	Avg.	96.3	92.4R	17.89	15.85	14.97	11.11	11.68
1985	Avg.	99.0	96.0	18.53	16.47R	15.56	11.85	12.12
1986	Avg.	100.0	100.0	19.38	16.70	15.76	12.28	12.58
1987	Avg.	102.8R	104.4	20.12	17.15	16.11	12.58	13.20
1988	Avg.	107.2R	108.6	20.91	18.51	16.95	13.17	13.77
1989	Avg.	109.4	114.0	21.97	20.02	18.41	13.71	14.16
1990	Avg.	109.7	119.4	22.90	20.93	19.12	14.62	15.28
Jan	1990	108.7	116.9	21.88	20.39	19.03	13.99	14.78
Feb	1990	109.5	117.6	22.51	20.63	19.14	14.49	15.03
Mar	1990	109.3	118.0	22.52	20.75	19.17	14.99	15.07
Apr	1990	109.1	118.1	23.17	21.20	19.46	14.83	14.93
May	1990	109.6	118.7	23.28	20.55	19.01	14.71	15.06
June	1990	109.4	119.2	21.85	20.63	18.96	14.69	15.05
July	1990	109.1	119.8	20.92	20.18	18.66	14.34	15.20
Aug	1990	109.3	119.8	23.88	20.51	18.59	14.50	15.33
Sept	1990	110.2	120.2	24.41	21.19	18.94	14.48	15.63
Oct	1990	110.6	121.2	23.11	21.39	19.12	14.78	15.59
Nov	1990	110.9	121.9	23.38	21.83	19.48	14.93	15.73
Dec	1990	111.0	121.8	23.90	21.89	19.88	14.7	16.01
Jan	1991	111.1	125.0	23.79	21.79	19.78	14.66	15.89
Feb	1991	110.6	125.0	25.23	22.45	20.13	14.63	16.10
Mar	1991	109.8	125.5	24.19	22.22	20.27	15.21	16.47
Apr	1991	109.1	125.5	24.77	22.50	20.31	14.63	16.64
May	1991	108.6	126.1	24.38	22.17	20.25	15.05	16.55
June	1991	108.5	126.7	23.58P	22.13P	19.90P	14.65P	16.51P
July	1991	108.2	126.8	–.–	–.–	–.–	–.–	–.–

P = Preliminary **R** = Revised since last month

[1] Statistics Canada, Prices Division, Ottawa: "Industry Price Indexes" (Catalogue 62-011). Indexes for the most recent six months shown are subject to revision. This category was formerly known as "Manufacturing." Monthly data for the period 1967 to 1990 is found in Report 278.

[2] New Base Year of 1986 as of Report 266. Previous Base Year was 1981.

[3] New Base Year of 1986 as of Report 264. Previous Base Year was 1981.

[4] Statistics Canada, Labour Division, Employment and Payrolls Section, Ottawa: "Employment, Earnings and Hours." Monthly data for the period 1983 to 1990 is found in Report 278.

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South Africa

		Average Declared Working Costs per Metric Ton of Gold Ore Milled [1] (Rand)	Tonnage-Weighted Index of Average Working Costs per Metric Ton of Gold Ore Milled [2] (March 1982 = 100)	Consumer Price Index [3] (1985 = 100)	Production Price Index All Groups [4] (1985 = 100)	Total Employment in Mining and Quarrying [5]	Total Salaries and Wages in Mining and Quarrying [5] (1,000 Rand)
							Annual Total [6]
1980	Avg.	35.50 R	—	51.9	55.2	709,042	2,237,689
1981	Avg.	41.87 R	—	59.8	62.7	722,918	2,756,928
1982	Avg.	47.23 R	103.9 R	68.6	71.4	702,041	3,181,584
1983	Avg.	51.88	115.0	77.1	79.0	700,901	3,563,282
1984	Avg.	58.95	130.3	86.0	85.6	711,511	4,134,390
1985	Avg.	68.70 R	151.7 R	100.0	100.0	724,587	4,778,612
1986	Avg.	80.18 R	177.9	118.6	119.6 R	756,637	5,767,950
1987	Avg.	95.01	223.1	137.7	136.2	751,864	6,911,395
1988	Avg.	106.69	241.1	155.4	154.1	705,355	7,774,054
1989	Avg.	116.65	273.0	178.2	177.5	700,360	8,833,934
1990	Avg.	129.37	305.3	203.8	198.9 R	677,742	10,193,209
							Monthly Total
Jan	1990	—	—	192.0	188.9 R	688,837	801,616
Feb	1990	—	—	193.3	190.3	674,026	767,274
Mar	1990	126.74	296.3	196.4	190.8 R	704,660	780,614
Apr	1990	—	—	198.3	194.1	696,107	810,474
May	1990	—	—	200.4	196.6 R	613,527	719,191
June	1990	128.25	299.87	201.8	197.2 R	676,621	841,165
July	1990	—	—	203.2	197.3 R	697,242	913,177
Aug	1990	—	—	206.5	199.4 R	686,385	902,392
Sept	1990	129.46	312.55	209.7	202.2 R	689,317	922,454
Oct	1990	—	—	211.1	205.5 R	676,833	882,603
Nov	1990	—	—	215.6	212.7 R	669,198	909,418
Dec	1990	133.02	312.37	217.1	212.0 R	660,151	942,831
Jan	1991	—	—	219.5	216.1	648,944	935,839
Feb	1991	—	—	222.2	216.9	650,948	893,373
Mar	1991	137.66	323.82	224.1	215.3	651,843 R	924,930 R
Apr	1991	—	—	227.3	216.5	639,939 R	887,722 R
May	1991	—	—	230.8	218.4	630,481	887,107
June	1991	134.65	317.23	232.4	219.3	—	—
July	1991	—	—	235.3	221.2	—	—

P = Preliminary **R** = Revised since last month

[1] Chamber of Mines of South Africa, Johannesburg: "Analysis of Working Results," published quarterly. Historical Data by month appears in Report 278.

[2] Page 16 of Report 178 contains description and calculation of index.

[3] Central Statistical Service, Pretoria: All income groups-weighted average. Historical Data by month appears in Report 278.

[4] Central Statistical Service, Pretoria: All commodities for consumption in South Africa.

[5] Central Statistical Service, Pretoria: Historical Data by month appears in Report 236.

[6] Annual total is shown, rather than monthly average, for indicated year.

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GOVERNMENT STATISTICS

United States

		Producer Price Index[1]		Consumer Price Index[2]	GNP Implicit Price Deflator[3]	Gross Average Hourly Earnings of Production or Non-supervisory Workers (US$)[4]			
		Industrial Commodities (1982 = 100)	All Commodities (1982 = 100)	(1982-1984 = 100)	(1982 = 100)	Metal Mining (SIC 10)	Primary Non-ferrous Metals (SIC 333)	Chemicals and Allied Products (SIC 28)	Electric and Electronic Equipment (SIC 36)
1980	Avg.	88.0	89.8	82.4	85.7	10.26	10.63	8.31 R	6.94
1981	Avg.	97.4	98.0	90.9	94.0	11.55	11.98	9.12	7.62
1982	Avg.	100.0	100.0	96.5	100.0	12.31	12.93	9.96	8.21
1983	Avg.	101.1	101.3	99.6	103.9	12.58	13.43	10.58	8.66 R
1984	Avg.	103.3	103.7	103.9	107.7	13.05	13.43	11.07	9.04
1985	Avg.	103.7	103.2	107.6	110.9	13.38	13.74	11.57 R	9.46
1986	Avg.	100.0	100.2	109.6	113.9	12.46	13.48	11.98	9.65
1987	Avg.	102.6	102.8	113.6	117.7	12.52	12.98	12.37	9.88
1988	Avg.	106.3	106.9	118.3	121.3	13.24	13.26	12.71	9.79
1989	Avg.	111.6	112.2	124.0	126.3	13.59	13.72	13.09	10.05
1990	Avg.	115.8	116.3	130.7	131.5	14.10	14.36	13.54	10.32 R
Jan	1990	114.1	114.9	127.4	—	13.69	13.95	13.34	10.13
Feb	1990	113.6	114.4	128.0	—	13.70	13.99	13.27	10.16
Mar	1990	113.2	114.2	128.7	129.5	13.80	14.04	13.34	10.17
Apr	1990	113.2	114.1	128.9	—	13.92	14.30	13.53	10.17
May	1990	113.5	114.6	129.2	—	13.96	14.16	13.46	10.22
June	1990	113.2	114.3	129.9	131.0	14.00	14.31	13.51	10.27
July	1990	113.4	114.5	130.4	—	14.29	14.49	13.58	10.34
Aug	1990	115.9	116.5	131.6	—	14.27	14.60	13.57	10.33
Sept	1990	118.4	118.4	132.7	132.2	14.41	14.48	13.62	10.42
Oct	1990	121.4	120.8	133.5	—	14.43	14.58	13.72	10.47
Nov	1990	120.7	120.1	133.8	—	14.34	14.73	13.73	10.53
Dec	1990	119.0	118.7	133.8	133.1	14.39	14.69	13.75	10.57
Jan	1991	119.3	119.0	134.6	—	14.73	14.63	13.85	10.60
Feb	1991	117.2	117.2	134.8	—	14.80	14.55	13.81	10.59
Mar	1991	115.6	116.1	135.0	134.8	14.93	14.55	13.85	10.55
Apr	1991	115.6 R	116.0	135.2	—	14.85	14.56	13.96	10.63
May	1991	116.1	116.5	135.6	—	14.79	14.52	14.01	10.66
June	1991	116.0	116.3	136.0	136.1	14.88 R	14.51 R	14.05 R	10.74
July	1991	116.0	116.0	136.2	—	15.10 P	14.57 P	14.14 R	10.77 R
Aug	1991	116.4	116.2	136.6	—	—.—	—.—	14.08 P	10.78 P

P = Preliminary **R** = Revised since last month

[1] US Bureau of Labor Statistics, Washington, DC: "Producer Prices and Price Indexes," (formerly "Wholesale Prices and Price Indexes"). Producer Price Indexes are revised four months after they are first released to reflect the availability of late reports and corrections by respondents. Historical data is presented in Report 278.

[2] US Bureau of Labor Statistics, Washington, DC: Consumer Price Index for All Urban Consumers, US City Average, All Items. Historical data is presented in Report 278.

[3] US Department of Commerce, Washington, DC: Bureau of Economic Analysis, National Income and Wealth Division: "Survey of Current Business." The GNP Implicit Price Deflator is published quarterly, and seasonally adjusted. Historical data is presented in Report 278.

[4] US Bureau of Labor Statistics, Washington, DC: "Employment and Earnings." All data based on 1972 revision of SIC Manual. Historical data is presented in Report 278.

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Volume and Price of Uranium Deliveries To The European Community [1]

— Compiled from data published by the Euratom Supply Agency —

Year	Volume of Deliveries to the EC [2] (MTU)	Percentage of Deliveries Made Under Spot Contracts	Medium or Long-Term Contracts [3] Average Price		Spot Contracts [3] Average Price	
			in ECU per pound U_3O_8	in US Dollars per pound U_3O_8	in ECU per pound U_3O_8	in US Dollars per pound U_3O_8
1977	n/a	n/a	n/a	n/a	n/a	$41.00
1978	n/a	n/a	n/a	n/a	n/a	$43.00
1979	10,000	n/a	n/a	n/a	n/a	$44.50
1980	8,600	n/a	n/a	$36.00	n/a	$35.00
1981	13,000	less than 10	n/a	$33.25	n/a	$28.00
1982	12,500	less than 10	ECU 32.25	$32.00	ECU 24.25	$24.00
1983	13,500	less than 10	ECU 34.75	$31.00	ECU 26.00	$23.25
1984	11,000	less than 10	ECU 37.75	$29.75	ECU 24.50	$19.25
1985	11,000	11.5	ECU 38.00	$29.00	ECU 19.50	$15.00
1986	12,000	9.5	ECU 31.50	$31.00	ECU 18.00	$17.75
1987	14,000	17.0	ECU 28.25	$32.50	ECU 15.00	$17.25
1988	12,500	4.5	ECU 26.92	$31.82	ECU 13.65	$16.13
1989	13,500	11.5	ECU 26.63	$29.35	ECU 11.04	$12.19
1990	12,800	16.7	ECU 23.08	$29.39	ECU 7.60	$ 9.68

P = Preliminary **R** = Revised since last month

[1] The twelve European Community member nations are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, and the United Kingdom; prior to January 1986, Spain and Portugal were not members of the EEC.

[2] The only deliveries taken into account are those made to final users, namely the electric utilities or their procurement organizations; deliveries to middlemen or fuel cycle companies are not included. The sales between utilities in the Community are also excluded. The quantities covered are those which were entered into accounting records during the year stated.

[3] For deliveries made under medium or long-term contracts (i.e., for which the time between the date of signature and the date of the last delivery exceeds one year) the prices were expressed in seven different currencies. In order to calculate an average price, these prices have been converted into European Currency Units (ECU) and US dollars. The average prices were weighted by quantity and converted on the basis of the average annual exchange rate of the different currencies against the ECU and US dollar. Exchange rates are published by European Communities Statistical Office and the International Monetary Fund.

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GOVERNMENT STATISTICS

US Uranium Marketing Activities Statistics

— Compiled from data published by the US Energy Information Administration [1] —

Year	Total Production (million pounds U_3O_8)	Deliveries to Domestic Utilities From US Suppliers [2] (million pounds U_3O_8)	Average Price of Delivered Uranium [2] ($/lb. U_3O_8)	Quantity of Uranium Imported [3] (million pounds U_3O_8)	Average Price of Imported Uranium ($/lb. U_3O_8)	Quantity of Uranium Exported (million pounds U_3O_8)
1976	25.5	27.6	$16.10	3.6	n/a	1.2
1977	29.9	27.8	$19.75	5.6	n/a	4.0
1978	37.0	31.6	$21.60	5.2	n/a	6.8
1979	37.5	33.0	$23.85	3.0	n/a	6.2
1980	43.7	35.0	$28.15	3.6	$43.10	5.8
1981	38.5	32.6	$34.65	6.6	$32.90	4.4
1982	26.9	23.5	$38.37	17.1	$25.19	6.2
1983	21.2	24.2	$38.21	8.2	$26.16	3.3
1984	14.9	22.5	$32.65	12.5	$21.86	2.2
1985	11.3	21.7	$31.43	11.7	$20.08	5.3
1986	13.5	18.9	$30.01	13.5	$20.07	1.6
1987	13.0	20.8	$27.37	15.1	$19.14	1.0
1988	13.1	17.6	$26.15	15.8	$19.03	3.3
1989	13.8	18.4	$19.56	13.1	$16.75	2.1
1990	8.9	20.5	$15.70	23.7	$12.55	2.0

P = Preliminary **R** = Revised since last month

[1] Sources: 1976-1983: US Department of Energy/Energy Information Administration, *Survey of United States Marketing Activity*.
1984-1990: Energy Information Administration, *Uranium Industry Annual*.

[2] Data for 1976-1981 includes both domestic utilities and agents.

[3] Includes imports by domestic utilities and domestic suppliers.

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